

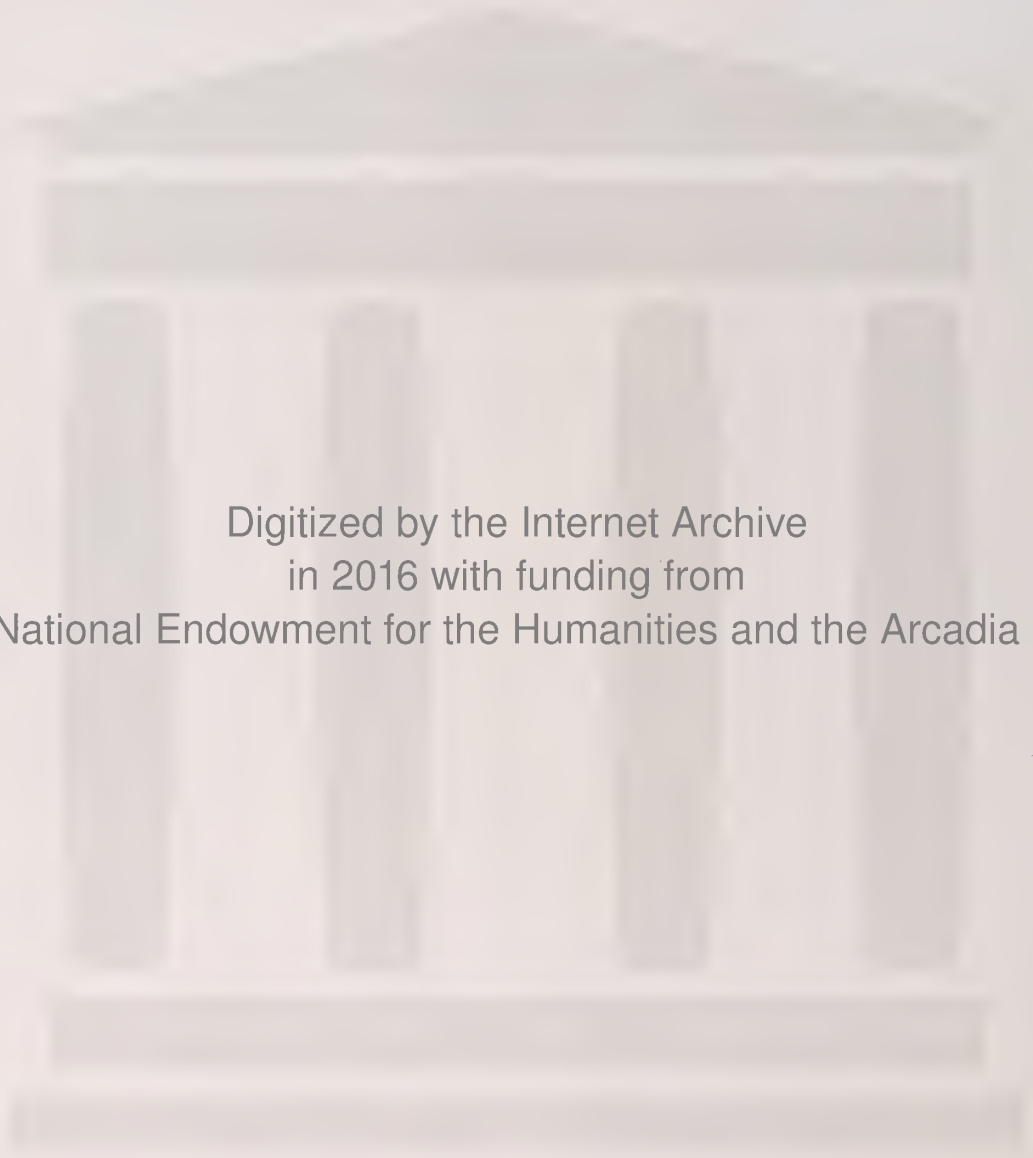
PER

The New York
Academy of Medicine



Library Fund
(General)

Established 1878



Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

January 1975

R.I. Medical Journal

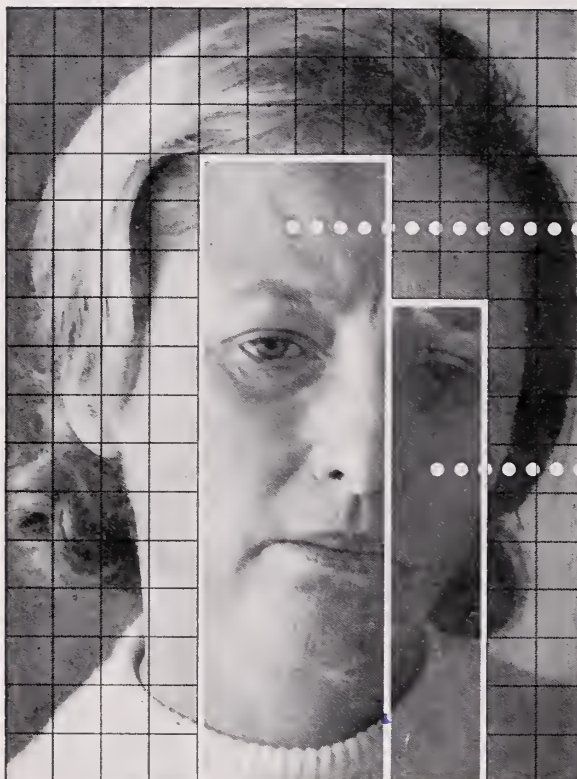
Vol. 58 No. 1

Island

BALCONY



Both often



Predominant
psychoneurotic
anxiety

Associated
depressive
symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

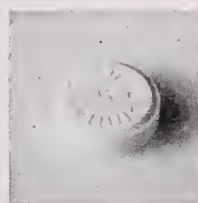
respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

450471

LIBRARY

MAY 24 1977

NEW YORK ACADEMY
OF MEDICINE

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

JANUARY, 1975

Volume 58, No. 1

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.

— o —

*John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
*Stanley M. Aronson, M.D.	*Charles A. Hall, Jr., M.D.
*Bertram H. Buxton, Jr., M.D.	Robert V. Lewis, M.D.
Robert P. Davis, M.D.	*Peter L. Mathieu, M.D.
*John A. Dillon, M.D.	*Jay M. Orson, M.D.
*Herbert Fanger, M.D.	Henry T. Randall, M.D.
	*Guy A. Settipane

(*Also Member Publications Committee)

TABLE OF CONTENTS

A LOOK AT ROMANIAN HEALTH-CARE—ORGANIZATION- EDUCATION-PRACTICE

Hanibal Hamlin, M.D. 19

CYSTINOSIS: A REVIEW

Chong M. Kong, M.D. 26

NEPHROTIC SYNDROME

Sewell I. Kahn, M.D. 28

EDITORIALS 30

PERIPATETICS 13

MESSAGE FROM THE DEAN 3

BOOK REVIEW 36

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

MEDICAL EVENTS CALENDAR

Wednesday, February 19, 1975

"GENETIC DISORDERS"
(to be announced)

Rhode Island Hospital
8th Floor Conference Room
1:00 p.m. - 2:00 p.m.

Saturday, February 22, 1975

"ALTERNATIVES FOR THE UREMIC PATIENT"
Eli A. Friedman, M.D.
Professor of Medicine
State University of New York,
Downstate Medical Center,
Brooklyn, New York

Rhode Island Hospital
George Building Auditorium
10:00 a.m.

Wednesday, February 26, 1975

**SYMPOSIUM SPONSORED BY NATIONAL KIDNEY
FOUNDATION**

KEY SPEAKER:

Calvin M. Kunin, M.D.
Chief, Medical Services,
Veterans Hospital,
Professor of Medicine,
University of Wisconsin,
Madison, Wisconsin

Miriam Hospital
Sopkin Auditorium
9:00 a.m.

HIS TOPIC:

**"THE OVERALL PROBLEM OF URINARY TRACT INFECTIONS
— EPIDEMIOLOGY AND NEW CULTURE TECHNIQUES"**
and, **"AN EXPOSITION OF THE CATHETER PROBLEM"**

**"NEW ADVANCES IN THE DIAGNOSIS AND LOCALIZATION
OF URINARY TRACT INFECTION"**

Stephen Zinner, M.D.
Assistant Professor of Medical Sciences,
Head, Division of Infectious Diseases,
Brown University,
Department of Medicine,
Roger Williams General Hospital

"PRACTICAL ASPECTS OF CATHETER CARE"

Jane DeGroot, R.N.
Nurse Epidemiologist,
Veterans Hospital,
Madison, Wisconsin

Wednesday, February 26, 1975

"JOINT MOTION AND LUBRICATION"

Rosario Tomaselli, M.D.
Orthopaedic Staff,
Rhode Island Hospital

Rhode Island Hospital
George Building Auditorium
1:00 p.m. - 2:00 p.m.

Friday, February 28, 1975

"THE ROLE OF CYCLIP AMP IN THE NERVOUS SYSTEM"

Dr. Theodore W. Rall
J. H. Hord Professor,
Chairman, Department of Pharmacology,
Case Western Reserve University,
Cleveland, Ohio

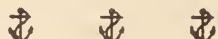
Colloquium
Division of Biological and
Medical Sciences
Brown University — 4:00 p.m.
(room to be announced)

Saturday, March 8, 1975

"BIOLOGICAL CONTROL OF HUMAN SCAR TISSUE"

Erle E. Peacock, Jr., M.D.
Professor and Chairman,
Department of Surgery,
University of Arizona College of Medicine,
Tucson, Arizona

Rhode Island Hospital
George Building Auditorium
10:00 a.m.



Brown University Affiliated Hospitals

REGULARLY SCHEDULED EVENTS

MONDAYS

9:30 a.m.	Medical X-Ray Conference, Memorial Hospital, X-Ray Department
10:30 a.m.	Pediatrics Grand Rounds, Roger Williams General Hospital, Kay Auditorium
12:00 noon	Renal Conference, Miriam Hospital, H-3 Conference Room
12:00 noon	Endocrinology Conference, Rhode Island Hospital, 434 APC
12:00 noon	G I Conference, Rhode Island Hospital, 434 APC
1:00 p.m.	Hematology Conference, Miriam Hospital, Pathology/Radiology Classroom
1:00 p.m.	Autopsy Conference, Rhode Island Hospital, Patsology/Radiology Classroom (1st Monday)
1:15 p.m.	Autopsy Gross Conference, Rhode Island Hospital, Autopsy Conference Room, Main Building
2:00 p.m.	Cardiology Rounds, Roger Williams General Hospital, West 2 Conference Room
7:00 p.m.	***Current Concepts in Internal Medicine, The Memorial Hospital

TUESDAYS

7:15 a.m.	Surgical Grand Rounds, Rhode Island Hospital, George Auditorium
8:30 a.m.	Urology Conference, Memorial Hospital, X-Ray Department
9:00 a.m.	Pulmonary Conference, Memorial Hospital, Pulmonary Conference Room
9:30 a.m.	Medical X-Ray Conference, Memorial Hospital, X-Ray Department.
10:30 a.m.	Cardiac Grand Rounds, Miriam Hospital
11:00 a.m.	Medical Grand Rounds, Roger Williams General Hospital, Kay Auditorium
11:00 a.m.	Surgical Mx Conference, Rhode Island Hospital, Surgical Sign-Out, Room 2, Main Building
12:00 noon	Electrocardiography Conference, Miriam Hospital, H-3 Conference Room
12:00 noon	Renal Conference, Rhode Island Hospital 434 APC
12:15 p.m.	Rheumatology, Rhode Island Hospital, 434 APC
1:00 p.m.	Rehabilitation Rounds and Conference, Miriam Hospital, Physical Therapy De- partment, (2nd and 4th Tuesday)
2:00 p.m.	Organ Review, Roger Williams General Hospital, Anatomy Lab
2:00 p.m.	Surgical Service Ward Rounds, Miriam Hospital
2:00 p.m.	Renal Pathology Conference, Rhode Island Hospital, George Auditorium, (4th Tuesday)
4:30 p.m.	Radiation Oncology, Radiation Oncology Conference Room
7:30 p.m.	***Morals and Medicine, Brown Extension Division

WEDNESDAYS

7:30 a.m.	Orthopedic Conference — E-3 Conference Room (1st Wednesday), Roger Williams General Hospital
7:30 a.m.	Surgical Resident's Conference, Roger Williams General Hospital, Surgical Con- ference Room, Prior — 4 (1st Wednesday — Surgical Resident's Conference) ** (2nd Wednesday, Cardio-Thoracic or Peripheral-Vascular Conference) (3rd Wednesday, Attending Surgeon's Conference) (4th Wednesday, Surgical Mortality Conference)
8:00 a.m.	Orthopedic Conference, Memorial Hospital, Richardson Lecture Room 1
8:30 a.m.	Medical Cardiac Grand Rounds, Miriam Hospital, H-3 Conference Room
8:30 a.m.	*Cardiac Evaluation Conference, Miriam Hospital, H-3 Conference Room
8:30 a.m.	Thoracic and Cardio-Vascular Surgical Rounds, H-3 Conference Room, Miriam Hospital, (1st Wednesday)
9:30 a.m.	Neuro-Pathology Conference (Organ Dissection) Rhode Island Hospital, Neuro- Path. Lab., 2nd Floor, Main Building, George Auditorium
10:30 a.m.	Physicians-in-Chief's Rounds, Miriam Hospital
10:30 a.m.	Cardiac Grand Rounds, Miriam Hospital
11:00 a.m.	Medical Grand Rounds, Rhode Island Hospital, George Auditorium d
12:00 noon	Pediatric Semiar, Miriam Hospital, H-3 Conference Room
12:00 noon	Medical Research Conference, Miriam Hospital, Medical Research Conf. Room
1:00 p.m.	Surgeon-in-Chief's Rounds, Miriam Hospital, H-3 Conference Room
1:15 p.m.	Autopsy Gross Conf., Rhode Island Hospital, Auto. Conf. Room, George Bldg.

2:00 p.m.	*Pulmonary, H-3 Conference Room, Miriam Hospital (rounds)
2:00 p.m.	Pathology Conference, Memorial Hospital, Richardson Lecture Room 1
2:00 p.m.	*Morbidity and Mortality Conference, Miriam Hospital, Room M, (4th Tuesday)
2:00 p.m.	Neuro-Path Conf., Auto-Conf. Room, Rhode Island Hospital
3:30 p.m.	Neuroscience Seminar, Miriam Hospital, Pathology/Radiology Classroom
4:45 p.m.	Pathology Journal Club, Rhode Island Hospital, 11th Floor Conf. Room, APC

THURSDAYS

7:30 a.m.	Surgical Service Meeting, Miriam Hospital, Sopkin Auditorium
8:30 a.m.	Cine Angiography Conference, Miriam Hospital, X-Ray Department
8:30 a.m.	Allergy Conference, 6th Floor APC, Rhode Island Hospital
8:30 a.m.	Surgical Research Conference, Rhode Island Hospital, Surg. Res. Conf. Room
9:00 a.m.	Pulmonary Conference, Memorial Hospital, Pulmonary Conference Room
9:30 a.m.	Medical X-Ray Conference, Memorial Hospital, X-Ray Department
10:30 a.m.	Cardiac Grand Rounds, Miriam Hospital
11:00 a.m.	Physician-in-Chief's Rounds, Roger Williams General Hospital, West 2 Conf. Room
11:00 a.m.	Medical Grand Rounds, Miriam Hospital, Sopkin Auditorium
11:00 a.m.	Neuro-Path Mx Conf., Rhode Island Hospital, Surg.-sign-out Room 2, Main Bldg.
11:00 a.m.	Pulmonary Conf., Rhode Island Hospital, 434 APC, (1st, 2nd, 4th Thursday)
12:00 noon	X-Ray Conference, Miriam Hospital, Pathology/Radiology Classroom
12:00 noon	*Infectious Diseases, 434 APC, Rhode Island Hospital
1:00 p.m.	*Oncology Conference, Pathology Conf. Room, Miriam Hospital
1:00 p.m.	Dermatology Rounds, Roger Williams General Hospital, West 2 Conference Room
1:00 p.m.	Rheumatology Conference, Miriam Hospital, Sopkin Auditorium
2:00 p.m.	Dermatology-Pathology Resident's Conference, Roger Williams General Hospital, Hospital, Pathology Conference Room
2:00 p.m.	Pathology Conference, Rhode Island Hospital, George Auditorium
2:30 p.m.	Topic Conference, Miriam Hospital, Surg. Res. Conf. Room
3:00 p.m.	Surgical Service Meeting, Memorial Hospital, Richardson Lecture Room 1
4:00 p.m.	Surgical Journal Club, George Auditorium, Rhode Island Hospital, (1st and 4th Thursday)
4:30 p.m.	Surgeon-in-Chief's Rounds, Memorial Hospital, Staff Room
5:30 p.m.	Surgical Mort. and Morb. (CLOSED), Rhode Island Hospital, George Auditorium, (1st and 4th Thursday)
8:00 p.m.	Peripheral Vascular Conference — Surgical Conf. Room, Prior 4, (2nd Thursday), Roger Williams General Hospital

FRIDAYS

8:30 a.m.	Urology Rounds, Roger Williams General Hospital, Pathology Conference Room
10:30 a.m.	Pediatric Grand Rounds, Rhode Island Hospital, George Auditorium
11:00 a.m.	G.I. Pathology Conf., Rhode Island Hospital, Surgical-sign-out Room 2, Main Bldg
12:00 noon	Autopsy Mx Conf., Rhode Island Hospital, Auto Conf Room
12:00 noon	Surgical Conference, Surgical Conf. Room, Prior 4, Roger Williams Gen. Hosp.
12:00 noon	Journal Club, Miriam Hospital, H-3 Conference Room
12:00 noon	Endocrinology Conference, Miriam Hospital, H-3 Conference Room
12:00 noon	*Cardiology, Rhode Island Hospital, 434 APC
12:00 noon	Radiology, Rhode Island Hospital, 434 APC (1st Friday)
12:00 noon	Hematology, Rhode Island Hospital, 434 APC (3rd and 5th Fridays)
1:00 p.m.	*Neurology Rounds, Miriam Hospital
1:00 p.m.	Surgical Chairman's Rounds, E-3 Conference Room, Roger Williams Gen. Hosp.
1:00 p.m.	*Gastroenterology Conference, Miriam Hospital, Path/Rad Classroom
1:15 p.m.	*Autopsy Gross Conf., Rhode Island Hospital, Auto Conference Room
4:00 p.m.	Thoracic-CV Conference, Rhode Island Hospital, 2nd Floor, APC

SATURDAYS

7:30 a.m.	Eye Conference, Rhode Island Hospital, 7th Floor, APC (1st Saturday)
8:00 a.m.	*Surgical Grand Rounds, Miriam Hospital, Sopkin Auditorium
8:00 a.m.	Surgical Grand Rounds, Pawtucket Memorial Hospital, Rich. Lecture Room 1
8:30 a.m.	Ob-Gyn Rounds, Women and Infants Hospital, Nurses Annex, Audt.
9:00 a.m.	Surgical Conference, Rhode Island Hospital, George Auditorium, (1st Saturday)
9:00 a.m.	Surgical Teaching Rounds, Miriam Hospital, O.R. Dressing Room

* Alternate Weeks

** Alternate Months

*** Fee is Required



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

**CONTINUING MEDICAL EDUCATION RESOURCES FOR THE
PRACTICING RHODE ISLAND PHYSICIAN**

Medicine, more than the other learned professions, requires of its adherents a commitment to continuing education. The vast network of medical lectures, conferences, grand rounds, symposia, conventions, journals and audiovisual aids found in most urban centers is in response to the collective realization by the profession that a physician who discontinues his education has begun the process of retirement from his profession. The investment of time, energy, and resources toward continuing education has been largely voluntary and has involved a substantial fraction of the practicing community. Some groups (notably the American Academy of Family Practice) expect from their members verification of participation in educational exercises. The likelihood of some system of periodic reaccreditation for professionally active physicians increases still further the need of fostering and maintaining superior facilities for continuing medical education in Rhode Island, designed to meet the needs of the physicians both in terms of time and subject matter.

Three organizations have expressed some interest regarding continuing medical education in the Rhode Island region: The Rhode Island Medical Society, Rhode Island Health Science Educational Council (RIHSEC), and Brown University. Representatives of these three institutions have met and have agreed to invest their previously independent efforts in an integrated unit called the *Cooperative Committee on Graduate Medical Education*. The three organizations have named their representatives to this group, the current composition of which is: William Fischer, Jr., Albert Wessen, Francis Lamb, Robert Lawton, Albert Most, Stanley Aronson, and David Greer (chairman).

The Coordinating Committee is presently estab-

lishing a central office and hiring a staff person to implement its functions, which have been identified as follows:

1. To develop a roster of qualified and competent speakers on subjects relevant to the current requirements of the profession;

2. To develop innovative program structures which avoid the single virtuoso-type lecture, but rather encourage active audience participation through the use of panels of speakers incorporating, wherever possible, members of the staff of the host hospital. (If clinical cases form the nucleus of any of these educational exercises, then such patients should be locally derived.);

3. To make these services of the committee available to the hospitals in the region. (In this regard the Committee has begun to organize evening programs at a number of regional institutions);

4. To coordinate the separate medical education programs in the various regional hospitals, medical societies, and colleges so as to avoid conflicts in scheduling;

5. To prepare a monthly listing of major educational exercises pertaining to medicine offered in this area for publication in the *RHODE ISLAND MEDICAL JOURNAL*;

6. To organize and supervise mini-courses in the clinical and basic sciences, using Brown University facilities and faculty. Some of these courses will be problem-oriented and conducted in the various hospitals of the community. RIHSEC will underwrite the expenses of this case-history approach to continuing medical education;

7. To cooperate with the Brown University Audiovisual Self-Instruction Committee in making

(Concluded on next page)

available to the practicing physician self-instructional instruments and resources to assist him in his continuing education. This medical school committee, chaired by Dr. N. Fausto, has created a center for self-instruction within the University BioMedical Center, composed of numerous, booth-like rooms each containing instruments for various types of self-instructional programs, (including synchronized slide-tape projectors, recorders, cassette projectors, film strip players, and video tape projectors). A diversified library of self-instructional material covering the basic sciences, pathophysiologic studies, techniques of physical examination, clinical pathology material, and a library of abnormal auscultatory sounds has now been gathered, indexed, and filed. It is hoped that this facility will be expanded and that it will be made available to the practicing physicians of the region in the near future. An interest-

ing component of this teaching facility is a computer link with the National Library of Medicine for various self-instructional programs displayed on a video screen;

8. To issue a monthly series of articles on current advances in therapy and diagnosis, to appear in this JOURNAL.

Through these efforts, the Committee hopes to encourage a greater number of physicians to enter into these diversified programs. The Committee would also welcome suggestions and recommendations concerning its efforts to facilitate the educational needs of its practicing colleagues. Communications should be sent to Dr. David S. Greer, Box G, Brown University, Providence, Rhode Island.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs
Brown University



Plan Now To Attend

THE ANNUAL MEETING
of the
Rhode Island Medical Society

WEDNESDAY, APRIL 16, 1975

CHATEAU DeVILLE
Warwick, Rhode Island

The Rhode Island Medical Society Necrology -- 1974

CHARLES J. ASHWORTH, M.D.

Charles J. Ashworth, a Warwick surgeon for almost 50 years, died on December 30, 1974. He was 74 years old.

Born in Providence, he was the first student to graduate from Providence College. He was also graduated from Tufts Medical School in 1927.

Doctor Ashworth was a member of the Providence Medical Association and member and former president of the Rhode Island Medical Society and the New England State Medical Society. He was a past president of Physicians Service, the Rhode Island Medical Society's surgical medical insurance plan. Doctor Ashworth was also a member of the American Medical Association, and was the only Rhode Islander to serve on the national council on medical service of the American Medical Association.

▲ ▲ ▲

MICHAEL J. O'CONNOR, M.D.

Michael J. O'Connor, a Providence physician for more than 45 years, died on December 25, 1974. He was 83 years old.

Born in Providence, Doctor O'Connor was a graduate of Holy Cross College, Harvard Medical School and the Massachusetts Eye and Ear Infirmary, Boston.

He was a member of the staffs of Rhode Island, Roger Williams, and Our Lady of Fatima Hospitals, and for many years he served as chief of the ear, nose and throat staff at St. Joseph's Hospital.

Doctor O'Connor was a member of the Providence Medical Association, the Rhode Island Medical Society and the American Medical Association.

▲ ▲ ▲

D. WILLIAM J. BELL, M.D.

D. William J. Bell, a Providence physician for 30 years, died on November 6, 1974. He was 64 years old.

Born in Woonsocket, Rhode Island, he was a graduate of Brown University, and McGill University Medical School.

Doctor Bell was on the staff at Rhode Island Hospital and the Women and Children's Hospital. He was a member of the DeMolay Legion of Honor, the New England Pediatric Society, the American Academy of Pediatricians, the Providence Medical Association, the Rhode Island Medical Society and the American Medical Association.

▲ ▲ ▲

MORRIS MARKS, M.D.

Morris Marks, a Pawtucket physician for more than 45 years, died on October 3, 1974. He was 74 years old.

Born in Warren, Rhode Island, he was a graduate of the Medical College of Virginia. Doctor Marks was a member of the Palestine Temple of the Shrine, a Mason, and a member of the Congregation Ohawe Sholom in Pawtucket.

He was on the staff of The Miriam Hospital and The Memorial Hospital.

Doctor Marks was a member of the Pawtucket Medical Association and the Rhode Island Medical Society.

▲ ▲ ▲

ROBERT H. WHITMARSH, M.D.

Robert T. Whitmarsh, former chief of surgery of Roger Williams General Hospital, died August 19, 1974. He was 87 years old.

Born in Kansas City, Mo., he was a graduate of Brown University, and the New York Medical School.

Doctor Whitmarsh served on the medical staff of Roger Williams General Hospital from 1926 to 1951 and was chief of surgery at the hospital for several years prior to his retirement. Since 1962, he served as a member of the board of trustees of Roger Williams General Hospital and was made an honorary member of the board in 1972.

He was President of the R. I. Chapter of the American College of Surgeons and the Providence Surgical Society. He was a member of the American Medical Association, the Rhode Island Medical Society, and the Providence Medical Association.

▲ ▲ ▲

JOSEPH DeLUCA, M.D.

Joseph DeLuca, a Providence physician, died July 8, 1974. He was 60 years old.

Born in Bristol, he was a graduate of the University of Rhode Island and the University of Maryland Medical School. He was on the staff of Rhode Island Hospital, St. Joseph's Hospital and Our Lady of Fatima Hospital and Providence Lying-In Hospital. He was the senior surgeon at Rhode Island Hospital.

He was a member of the Providence Medical Association, the Rhode Island Medical Society, the Providence Surgical Society, a fellow of the American College of Surgeons; a diplomat of the

(Continued on page 7)

The Council of the
New England State Medical Societies
announces its

15% or \$7500
NEW KEOGH PLAN

Choose your investment

- Commercial Paper
- Savings Accounts
- Treasury Notes
- Life Insurance
- Annuities
 - (a) variable
 - (b) fixed
- Mutual Funds
 - (a) Income
 - (b) Growth
 - (c) Money Market
- Stocks
- Bonds

Understand the advantages and consequences of this new law
before you update your existing plan or start a new one.

Write or call



New England Physicians Advisory Services, Inc.

One Wells Avenue, Newton, Mass. 02159 (617) 965-5100

NECROLOGY

(Continued from page 5)

American Board of Surgery; associate professor of medical surgery at Brown University Medical School.

▲ ▲ ▲

ALFRED L. QUARTAROLI, M.D.

Alfred L. Quartaroli, a psychiatrist and former clinical director of the Cranston Community Mental Health Board, died June 4, 1974. He was 47 years old.

Doctor Quartaroli was a 1951 graduate of Providence College, and a graduate of the medical school of the University of Bologna, Italy. He served his internship at St. Joseph's Hospital, Providence, and had been a resident psychiatrist at the Institute of Mental Health, Cranston.

After a two-year fellowship in child psychiatry at Bradley Hospital, he was engaged in private practice. He was a staff member of Our Lady of Providence and Our Lady of Fatima units of St. Joseph's Hospital, Butler Health Center and the Charles V. Chapin Hospital.

The doctor was a member of the Rhode Island Society for Neurology and Psychiatry, the Rhode Island branch of the American Psychiatric Association, the Society for Adolescent Psychiatry, the Providence Medical Association and the Rhode Island Medical Society.

▲ ▲ ▲

HENRY M. TYSZKOWSKI, M.D.

Henry M. Tyszkowski, a practicing physician in Rumford for the last 17 years, died July 3, 1974. He was 53 years old.

Born in Fall River, Massachusetts, he was a graduate of Boston College and New York Medical College. He was a member of the staff of St. Joseph's Hospital and the Fatima unit.

He was a member of the Rhode Island Medical Society, American Academy of Family Physicians, Rhode Island Family Physicians Association, Metacomet Country Club and St. Sebastian's Christian Couples Club.

▲ ▲ ▲

EARL J. MARA, M.D.

Earl J. Mara, a practicing physician in Pawtucket since 1934, died June 14, 1974. He was 65 years old.

Born in Pawtucket, he was graduated from Georgetown University and Georgetown Medical School, Washington, D. C. He served on the staff of the Memorial Hospital in Pawtucket and Notre Dame Hospital in Central Falls, and was a con-

sultant at Dr. U. E. Zambarano Memorial Hospital, Burrillville, R. I.

Doctor Mara was a past president of the Cadeuceus Club of Pawtucket and a member of the intern and staff associates of The Memorial Hospital. He was a member of the executive committee of Blue Cross board of directors and was vice chairman of Blue Shield for many years. Doctor Mara was also a member and past president of the Rhode Island Medical Society and the Pawtucket Medical Association.

▲ ▲ ▲

HOWARD E. BLANCHARD, M.D.

Howard E. Blanchard, a practicing physician on Elmwood Avenue from 1905, died June 10, 1974. He was 91 years old.

Doctor Blanchard was a graduate of the Jefferson Medical College of Philadelphia. He was a former chief of staff at Rhode Island Hospital.

The doctor served as a captain in the Medical Corps during World War I.

He was a member of the American Medical Association, the Providence Medical Association and the Rhode Island Medical Society.

▲ ▲ ▲

JOSEPH H. LADD, M.D.

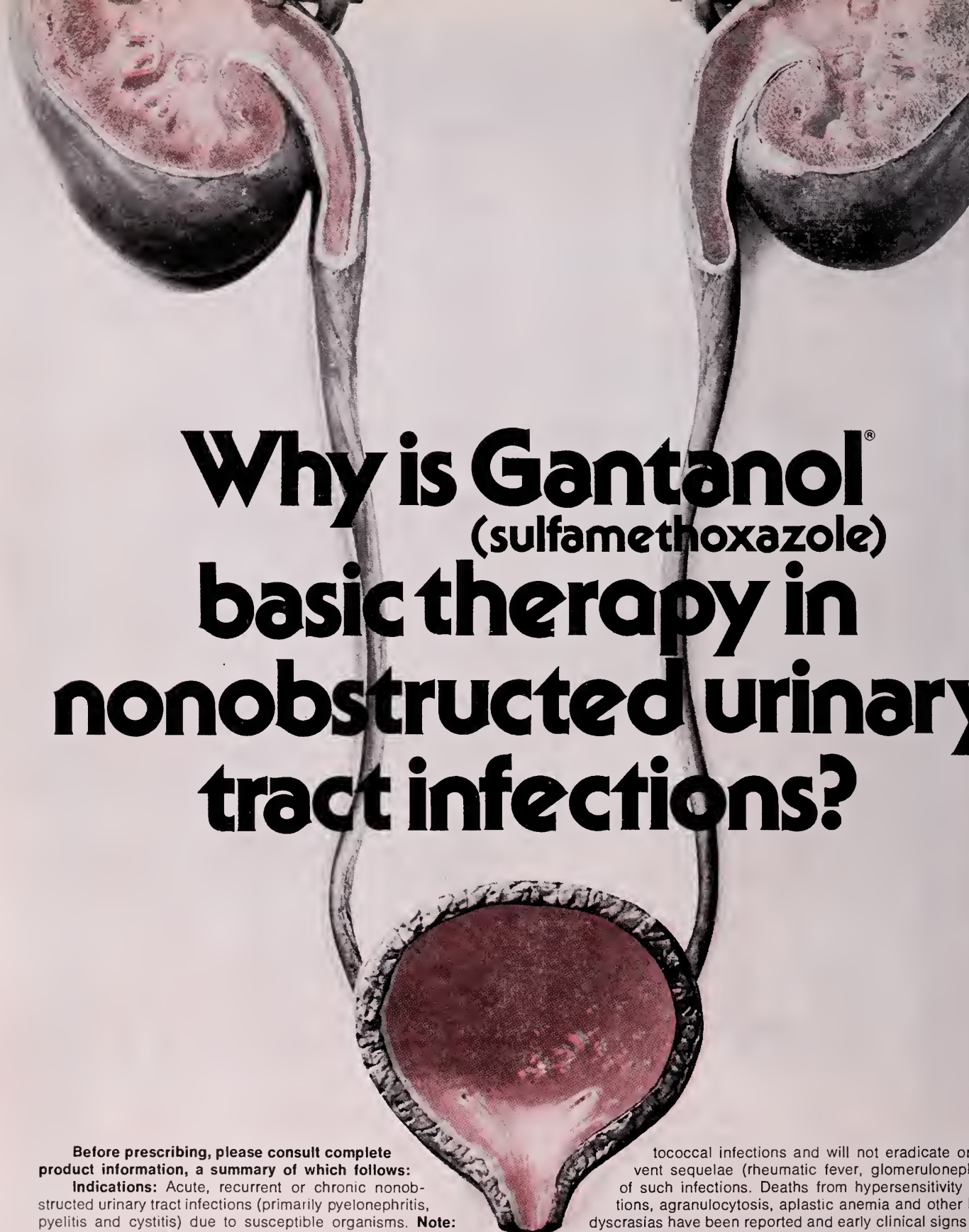
Joseph H. Ladd, M.D., the first superintendent of the Dr. Joseph H. Ladd School in Exeter, died May 12, 1974. He was 98 years old.

Doctor Ladd pioneered efforts in Rhode Island to rehabilitate the mentally retarded. He guided the Ladd School through its growth from a single farmhouse to a sprawling complex housing nearly 1,000 residents at the time of his retirement in 1956. As the school expanded, Doctor Ladd gained fame as one of the nation's leading authorities on the care and treatment of the mentally deficient.

Doctor Ladd was born in 1876 in High Forest, Minn. He spent two years at Norwich University, Northfield, Vermont, before studying medicine at Dartmouth Medical College, where he received his degree in 1900. That year he joined the staff of the Walter E. Fernald School for the mentally handicapped in Waltham, Mass. He remained there until 1907, when Rhode Island opened its school in Exeter and named him its superintendent.

Doctor Ladd was the state chairman for the 1965 Easter Seal campaign of the Meeting Street School. He was a past president of the American Association of Mental Deficiency and a past vice president of the Rhode Island Medical Society.

He was also a member of the American Medical
(Continued on page 10)



Why is Gantanol[®] (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic strep-

tococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, pur-

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli*, *Klebsiella-Aerobacter*, *Staph. aureus*, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy **Gantanol**[®] (sulfamethoxazole) Tablets/Suspension (0.5 Gm) (0.5 Gm/teasp.)

pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasps.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasps.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

NECROLOGY

(Continued from page 7)

Association, the Washington County Medical Society, the Rhode Island Medico-Legal Society and the New England Psychiatric Society.

▲ ▲ ▲

GEORGE A. ERNST, M.D.

George A. Ernst, M.D., an obstetrician and gynecologist with offices in Greenville and Providence, died May 15, 1974 at the age of 52.

Born in Kansas City, Kansas, he was a graduate of the Boston University School of Medicine in 1951.

He was a World War II veteran, commissioned in the Navy Air Corps, and was a recipient of the Distinguished Flying Cross and six Air Medals.

He was on the staff of Providence Lying-In, Rhode Island and Roger Williams General Hospitals. He was a member of the American Medical Association, the New England Obstetrical Society, Rhode Island Medical Society, the Providence Medical Society and the American College of Gynecologists.

▲ ▲ ▲

DAVID FREEDMAN, M.D.

David Freedman, M.D., a former chief of surgery and president of the medical staff at The Miriam Hospital, died April 24, 1974. He was 65 years old.

Born in Providence, he was graduated from Harvard Medical School in 1934.

He served his internship at Rhode Island Hospital. His surgical residency was at Truesdale Hospital, Fall River.

A Fellow of the American College of Surgeons, and a diplomate of the American Board of Abdominal Surgery, he was a past president of the Providence Medical Society and the Providence Surgical Society. He was also a member of the International College of Surgeons and the Rhode Island Medical Society and its House of Delegates.

▲ ▲ ▲

BRUCE W. SMITH, M.D.

Bruce W. Smith, M.D., a Barrington physician since 1954, died in London on April 10, 1974. He was 58 years old.

Born in Narragansett, he was graduated from Tufts Medical School in 1940 and served his internship at Rhode Island Hospital.

Doctor Smith served in the Navy Medical Corps during World War II, assigned to a Marine unit in the Pacific.

Doctor Smith was a member of Barrington Congregational Church, the American Medical Association, the Rhode Island Medical Society and the Providence Medical Association. He was also a past president of the Bristol County Medical Society.

▲ ▲ ▲

FRANK Y. C. SOONG, M.D.

Frank Y. C. Soong, M.D., a Warwick general practitioner since 1956, died Jan. 20, 1974. He was 54 years old.

Born in Shensi Province, China, he was graduated from the National Chun Cheng Medical School of Nanchang, China, in 1945. Doctor Soong came to the United States in 1947 and completed postgraduate courses at Cornell University Medical School.

He served his internship at St. John's Long Island City Hospital and later took up residency at the Rhode Island Medical Center.

During World War II, he was a captain in the Chinese Air Force Medical Corps.

His hobby was Tai-Chi Chuan, a routine of physical exercises developed more than 1,000 years ago by the Chinese. Two years ago, he wrote an article for a medical journal extolling the health benefits of the ancient routine.

He was a member of the Kent County Medical Society, the Rhode Island Medical Society, the American Medical Association, the American Academy of General Practitioners, the American Association of Foreign Medical Graduates, the Chinese-American Medical Association and the American College of Emergency Physicians.

▲ ▲ ▲

JOSEPH A. PALUMBO, M.D.

Joseph A. Palumbo, a state medical examiner for 18 years and acting chief medical examiner since 1966, died April 4, 1974. He was 59 years old.

Born in Cranston, Rhode Island, he was graduated from Providence College and Georgetown University in 1942.

Doctor Palumbo was a captain in the Army Medical Corps during World War II.

He was a member of the Providence Medical Association, the Rhode Island Medical Society and the American Medical Association.

▲ ▲ ▲

WILLIAM A. MARSHALL, M.D.

William A. Marshall, M.D., a Warwick general practitioner, died March 2, 1974. He was 40 years old.

(Concluded on page 11)



Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."^{1*}

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin[®] alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

**Fire fighter
for arthritic
flare-ups.**

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.
Ragan, C.: The Clinical Picture of Rheumatoid Arthritis. in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia: Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpre-

dictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dys-

pepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

NECROLOGY

(Concluded from page 10)

Born in Ballymena, Northern Ireland, he was graduated from Trinity College in Dublin, Ireland, in 1957.

He served his internship at Roger Williams General Hospital.

Doctor Marshall served as a lieutenant commander in the U.S. Navy Medical Corps for two years.

From 1962 to 1965 he was a member of Barrington's first mental health board. While in Barrington, he was named to a special legislative committee created by the General Assembly to investigate the need for a hospital on the east side of Narragansett Bay.

He was a member of the Kent County Medical Society, the Rhode Island Medical Society and the American Medical Association.

▲ ▲ ▲

PHILIP BATCHELDER, M.D.

Philip Batchelder, M.D., a retired Providence physician, died Feb. 11, 1974. He was 78 years old.

Born in Haverhill, Massachusetts, he was graduated from the University of New Hampshire and the Harvard Medical School.

He served his residency in radiology at Massachusetts General Hospital.

He was a member of the Army Medical Corps during World War I, with the Yankee Division in France.

Doctor Batchelder was active in the treatment of tuberculosis in the days when the disease was a major health problem.

He was a member and past president of the Providence Medical Association, a member of the Rhode Island Medical Society and the American Medical Association. He was also a member and past president of the New England Roentgen Ray Society, and the New England Cancer Society, and the Rhode Island Cancer Society. He was also a fellow of the American College of Radiology and a member of the Radiological Society of North America. He was also a past president of the Rhode Island Tuberculosis Association.

▲ ▲ ▲

DAVID LITCHMAN, M.D.

David Litchman, M.D., a Providence physician for 35 years, died March 15, 1974. He was 72 years old.

Born in Woonsocket, he was graduated from Rhode Island College of Pharmacy and Tufts University Medical School.

He served his internship at Boston City Hospital.

pital, and later returned to practice in Rhode Island.

During World War II, Doctor Litchman served with the Army in the Pacific Theater. He was chief of medical service of the 49th General Hospital.

He began his career as a pharmacist, not entering medical school until he was past 30 years old.

He was a member of the Providence Medical Association, the Rhode Island Medical Society and the American Medical Association. His memberships also included the New England Diabetes Association, the American Heart Association, and the American Society of Internal Medicine.

▲ ▲ ▲

EDMUND J. SYDLOWSKI, M.D.

Edmund J. Sydlowski, M.D., a Providence general practitioner for 35 years, died March 9, 1974. He was 63 years old.

Born in Providence, he was graduated from Providence College and Georgetown Medical School.

Doctor Sydlowski was an Army veteran of World War II.

He was a member of the Providence Medical Association, the Rhode Island Medical Society and the American Medical Association.

WHAT LABORATORY SERVICES DO YOU REQUIRE?

Routine Tests?

We do them all—quickly, reliably, and at moderate cost.

Unusual Tests?

We routinely perform hundreds of uncommon procedures, including the new assay for Carcinoembryonic Antigen (CEA).

Test Combinations?

We offer a variety of useful profiles, all designed to provide a maximum of information at minimum cost.

For detailed information and complimentary supplies, please write or call:



**LEARY
LABORATORY, INC.**

A Smith Kline Clinical Laboratory
Serving New England and the Nation Since 1929

Providence, R.I., Laboratory Locations:

655 Broad Street (401) 421-1138	189 Governor Street (401) 351-4900
111 Plain Street (401) 421-9403	

Central Laboratory: 43 Bay State Road Boston, Mass.
Telephone (617) 536-2121



R_x for OVERWORKED DOCTORS

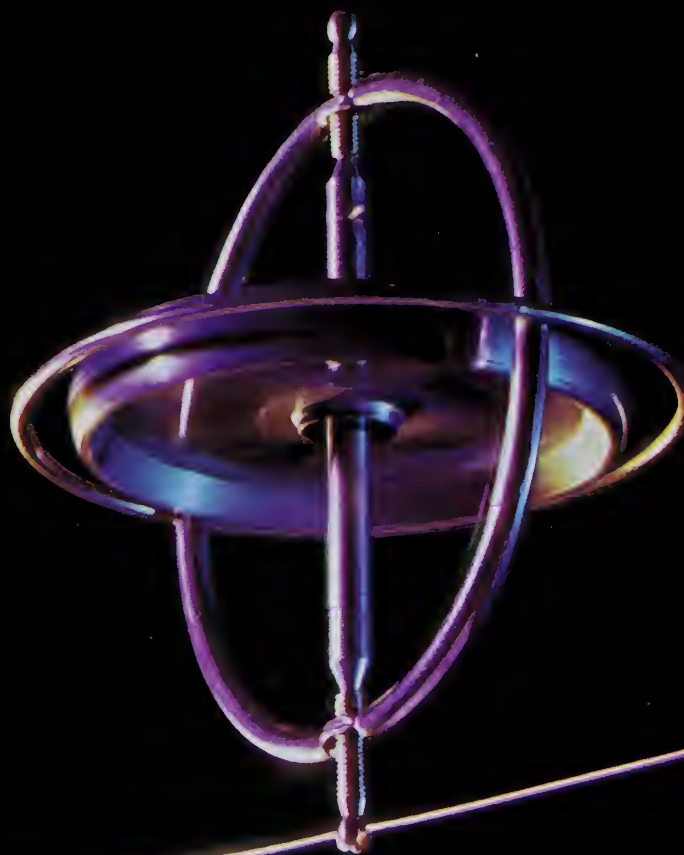
It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.





Keeping things in balance...*

Antivert[®]/25 Tablets (25 mg. meclizine HCl)

***INDICATIONS.** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows.

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation

has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG *Pfizer*

A division of Pfizer Pharmaceuticals
New York, New York 10017



Take your C.M.E. by the sea

**49 Continuing Medical Education courses at
AMA's Annual Convention, June 14-18, 1975
Atlantic City, New Jersey**

Those 49 Category I Continuing Medical Education courses are the largest number ever offered at an AMA convention. On top of that, there'll be Category I symposia and medical motion pictures on a wide variety of specialties.

Also featured are a number of special interest programs: a two-day session on the Medical Aspects of Sports, a series of special courses on clinical pathology, and a joint program by the American Veterinary Medical Association and the AMA on diseases transmitted to man by household pets. Physicians' wives and families will be offered interesting programs co-sponsored by the AMA's Council on Scientific Assembly and the Woman's Auxiliary of the AMA.

For more information, write:
Dept. of Circulation & Records, AMA,
535 N. Dearborn St., Chicago, IL 60610,



Peripatetics

The Department of Continuing Medical Education of the American Medical Association has notified the Medical Society that the following physicians are the recipients of the 1973 AMA physicians award:

MICHAEL A. ABELS, Newport; RICHARD S. BAKULSKI, Providence; AARON E. BOORSTEIN, Newport; EUGENE SCHOENFELD, Providence; EDUARDO SEGURA, West Warwick,

NOLAN D. SHIPMAN, Newport; RICHARD P. SNYDER, Greenville; MANUEL E. SORIA, Providence; SE DO CHA, Providence; ROBERT D. COLI, Warwick,

ALFONSAS DAINIUS, Providence; KERMIT W. DEWEY, Tiverton; MICHAEL S. EWER, Pawtucket; CARLOS E. FABRE, Providence; SALMA M. SHAABAN HASSAN, Providence,

ROYAL C. HUDSON, Barrington; MICHAEL A. INGALL, Providence; STEFAN ISSARESCU, Providence; SAEREE JANEWIT, Providence; HARRY M. KECHIJIAN, Central Falls,

PATRICIA J. KENNEDY, Providence; ROBERT J. KOTERBAY, Portsmouth; GEORGE W. KRIEBEL, Providence; CHARLOTTE TSUI LIU, Warwick; LAWRENCE H. LUPPI, Newport,

RICHARD T. McDERMOTT, Warwick; CARLOS MORENO, Providence; GUSTAVO A. MOTTA, Providence; NALIN G. NANAYAKKARA, Newport; RALPH F. PIKE, Providence,

JOSE M. PORRES, Providence; SYED M. SAYEED, Providence; RONALD L. SCHNEIDER, Providence.

* * *

(Continued on Next Page)

PRIME OFFICE SPACE FOR LEASE

PAWTUCKET OPPOSITE MEMORIAL HOSPITAL

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

CALL ALLIED INVESTMENT
434-2974 or 433-0759

The Pain Phone

When a telephone prescription for pain relief is necessary or convenient, you can call in your order for Empirin Compound with Codeine in 45 of the 50 states! That includes No. 4, which provides a full grain of codeine for more intense, acute pain.

† The exceptions:
Alaska, Arizona, Maine,
Oregon, Rhode Island, and
the District of Columbia.

EMPIRIN[®] COMPOUND c CODEINE

No. 4 codeine phosphate*
(64.8 mg) gr 1

No. 3 codeine phosphate*
(32.4 mg) gr ½

Each tablet also contains aspirin
gr 3½, phenacetin gr 2½,
caffeine gr ½.

* Warning—may be habit-forming.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

LOUIS FRAGOLA was recently elected President of the Rhode Island Dermatological Society and EUGENE P. RIVERA, was elected Secretary-Treasurer.

* * *

The following physicians were recently elected officers of the Women and Infants Hospital of Rhode Island:

SUMNER I. RAPHAEL, President; EDWARD CARDILLO, Vice President; MARIO VIGLIANI, Secretary; and HOWARD HALL, Treasurer.

* * *

SALVATORE R. ALLEGRA, Director of St. Joseph's Department of Pathology, has received a citation of appreciation from Tufts University School of Medicine, where he serves as an Associate Clinical Professor of Pathology.

* * *

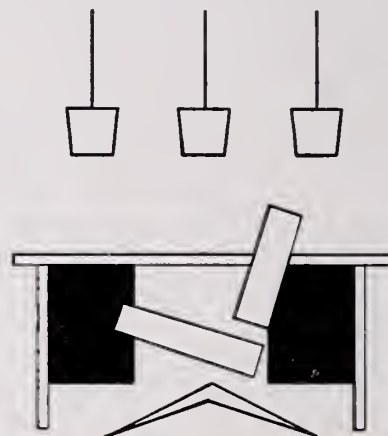
ROSWELL D. JOHNSON, Director of Brown University's Health Services was recently awarded an honorary membership by the Rhode Island As-

(Concluded on Page 36)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) Gaspee 1-5228

We have a specialty too. Office interiors.



ROITMAN & SON, INC.

Fine Furniture and Accessories

161 South Main Street, Providence, Rhode Island 02903
Telephone (401) 861-6010

Open Monday and Thursday evenings until 9.
Convenient terms • Free parking
Delivery arranged beyond local area.

We plan and furnish professional offices of any size, from the carpet up. Our professional interior designers work with you or with your architect. Our people are not only highly talented, they are experienced. Furnishing your office can be one thing you don't have to worry about. Just call us. 861-6010.



Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities.

Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules in Single Unit Packages of 100 (intended for institutional use only).

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH **DYAZIDE**[®]

Trademark

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.

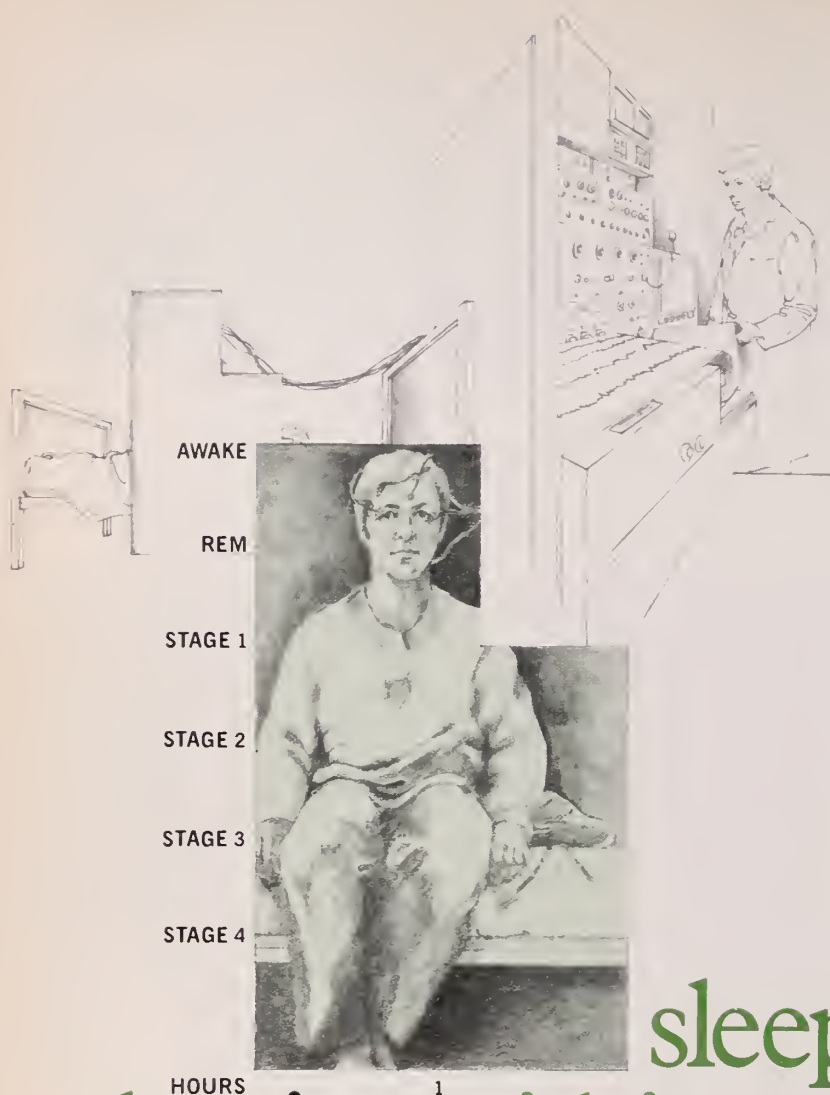
Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K⁺ rich diets needed as a rule



Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

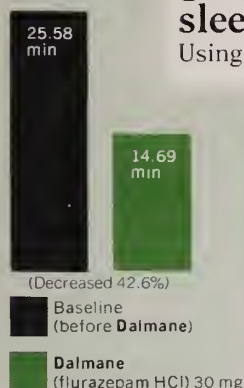


sleep
begins within
17 minutes, on average ...
an initial benefit of

Dalmane[®]
(flurazepam HCl) proved by a
22-night clinical study of insomnia patients
in the sleep research laboratory and at home¹

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.¹

Average Time Required
to Fall Asleep (4 Studies,
16 Subjects²⁻⁵)



confirmed by clinical studies in four geographically separated sleep research laboratories²⁻⁵

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage²⁻⁵

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, (e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

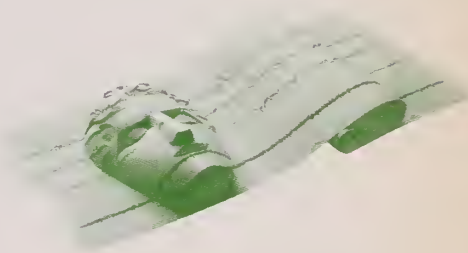
REFERENCES: 1. Kales A, et al: *Arch Gen Psychiatry* 23:226-232, Sep 1970

2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971

3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ



when restful sleep
is indicated

Dalmane[®]

(flurazepam HCl)

One 30-mg capsule h.s. — usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule h.s. — initial dosage for
elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

When diarrhea has his number...



Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea

and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil[®]
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)
atropine sulfate 0.025 mg.

Usually stops diarrhea promptly.

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

454 R

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

Kefzol[®]

cefazolin sodium

Ampoules, equivalent to 1 Gm. of cefazolin



*Additional information available
to the profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206
400380

A Look At Romanian Health-Care Organization-Education-Practice

*Majority Engaged In Medical Pursuits
In Both Romania And United States
Seek Optimum Care For Sick.*

By Hannibal Hamlin, M.D.

A trip to Romania was granted by the Office of International Health, Department of Health, Education and Welfare (HEW), Washington, D.C. (August 1971) with the euphemistic intent of promoting exchange of medical information and personnel.¹

I thought I heard my name sound over the loudspeaker while clearing customs in the capital airport — and I was soon greeted with words in perfect English by Dr. Mihail Stanciu who brought welcome from the No. 1 Romanian neurosurgeon, Prof. N. Constantin Arseni. His senior assistant became my fulltime guide and interpreter during the next four weeks. To prepare for the assignment this personable Graeco-Romanian had been studying English for six months on his own with aid from a sometime tutor. On the first ECFMG (Educational Council for Foreign Medical Graduates) examination ever conducted in the U.S. Embassy (February 1972) he achieved a grade of 85. Preferential school instruction in a second language (formerly Russian) is currently reported to be: English-French-Russian-German.

We started with 11 days in and around Bucha-

HANNIBAL HAMLIN, M.D., *Chief, Neurosurgical Clinic, Massachusetts General Hospital; Consultant, Rhode Island, Miriam, and Pawtucket Memorial Hospitals.*

rest, which were devoted to the large *Spitalul GH. Marinescu*, a smaller general hospital and an emergency hospital. We visited the national (and largest) medical school, the Institute of Epidemiology, and the Ministries of Health and Education. Elsewhere we went to urban and suburban polyclinics and dispensaries. Twelve days were taken up by visits to the university hospital and oncological institute at Cluj, followed by the older Iasi (Jassy) school which featured a tour of the earliest psychiatric institution, and finally a fine new hospital-polyclinic at Constanta. It was not possible to include the smaller teaching centers of Timisoara, Craiova, and Turgu-Mures.

HISTORICAL

Early Romanian health-care appears to have relied on traditional precepts of animal husbandry, herbalism, and barber surgery to assuage common afflictions, promote sanitation, and mend the wounds of warfare. Having been flanked on three sides by intermittent outbreaks of religio-chauvinistic or internecine-economic conflicts for several centuries, it was natural that recurrent armed strife would supply an important source of sick and wounded people and needs for pertinent medical instruction. As a harbinger of truce, the Society of Physicians and Naturalists (founded at Iasi—1832) may have signalled the start of Romanian

(Continued on next page)

academic medicine. Dr. Carol Davila, an international military surgeon (1828-84), is regarded as the principal progenitor of the Bucharest Medical School (1857) which superseded the army surgical tutorials he had organized during previous years. His education had been obtained in several famous clinics of Paris and his surgical apprenticeship on several European battlegrounds. He came to Romania in 1853 on government invitation to develop a training program for military surgeons.

The Republicii Socialiste Romania (RSR) is a compact country somewhat comparable to the states of Colorado or Oregon, being endowed with similar beauty and rich resources; also by centuries of imperishable history which is reified among approximately 22 million persons of proto-Slavic, Graeco-Roman, Ottoman, and European origins who live and work around the growing cities; or over the forested slopes and vales of the Carpathian mountains; or in the oil and gas fields of the Transylvanian plateau; or on fertile farmlands of the southern plains and along the magnificent Danube delta and Black Sea coast.

Prior to World War II benefits from medical progress at home or abroad scarcely touched agrarian families, who comprised about 80 per cent of the population. Postwar recovery was generated by expansion of industry and urbanization during the next 25 years, which reduced the ratio to less than 60 per cent. This change was accompanied by systematic regionalization of clinical facilities, both rural and urban, as far as possible in accord with population densities among counties (comprising towns, villages, and agricultural communes) and the availability of doctors and their assistants.

Essential services (excluding dentistry) are provided by 30-odd thousand physicians (approximately 1/700), nearly two-thirds of whom are engaged in general practice and the remainder in specialized clinical endeavor. Some 40 per cent of the total are women. There are about 3000 dentists. Coverage has gradually been extended over all areas except the upper Carpathians and lower Danube plain through placement of recent medical graduates ("externs") who are given choices of openings according to academic rank. They are guided by other senior graduates who are generalists or may be otherwise experienced in the basic specialties, with assignments singly or as groups to field units and dispensaries in villages or towns.

The structure and distribution of health-care after 1944, following ascendancy of the RSR, came under government supervision, which developed a proliferation of services and placement control of physicians and co-workers to the extent that medical graduates are required to spend their next three years of individual practice ("externship") living and working among the rural population. The ranks of specialization are maintained through competitive examinations offered during progression of field experience for assignments to polyclinics and hospitals that provide further training ("internship") toward institutional appointments. Investigative work is opportunely oriented toward practical problems connected with therapy. Theoretical research usually is conducted at special institutes which are affiliated among the six national medical schools. Administrative coordination between the ministries of health and education makes the system work.

In the Romanian villages one might hear about symptomatic remedies of peasant or gypsy origin, but no evidence elsewhere of secondary practitioners or paramedical cults like those that survive in the U.S. (ie, osteo/homeo/naturopathy, chiropractic or cryonics). Harking back to an archaic tradition of aristocratic hygiene are several 19th century sanatoria or "balneotherapy" rustic spas, intended formerly for the *haut monde*; but now, in addition to being available for domestic citizenry on legitimate prescription, gain support from tourism. A modern headquarters at Otopeni near Bucharest under guidance of a spry 77-year-old *regisseur*² enjoys a salubrious and long-distance reputation for rejuvenation of the soma, dermis, and psyche among her patrons, often celebrities who might include some of the Ponce-de-Leon personalities of international entertainment, leisure, and sport.

PUBLIC HEALTH

Health data for Romania have been sparsely compiled for about three decades.³ A recent report from the ministry presents nine chapters covering demography, disease incidence, and morbidity/mortality figures with a breakdown of all service facilities and the scope of their activities.⁴ The meager statistics may be summarized for comparative relevance to other countries: National sex ratio over a ten-year period indicated consistent female preponderance for all age groups. Recent birth rates (live neonates per 1000 inhabitants) were reported to have nearly doubled the "natural surplus" (excess of all live births over total num-

ber of deaths) within three years following a government decree (1962) that changed nonrestrictive abortion to allowance only by medical certification. The general death rate appeared to be running about equal to or slightly less than the average for most European nations. Maternity mortality was higher, and infant mortality (deaths in the first year of life) was 46.6 per 1000 for 1967. Principal causes of all deaths were:: 1—cardiovascular, 2—cancer, 3—infection (no figures on trauma). Longevity prediction in 1969: approximately 66.5 (males) and 70.0 (females), which was said to have risen more than 25 per cent during the preceding 15-year interval (recent U.S. average 66.8 and 74.3).

MEDICAL EDUCATION

Admission into the six-year medical program is attained through competitive examinations open to accredited candidates who had been graded in premedical subjects during their final years of secondary education. Mean age on entry is 18.6 male and female. The current ratio of acceptances for applicants among the six schools is estimated at 1:8. There are three examinations that require answers in four categories comprising basic knowledge, followed by oral quizzes. Entrants numbered about 1700 during 1970 and 2100 for 1972. Intramural examinations are given at trimester intervals. Failure would lead to dismissal or repetition of courses or possibly the entire year and might risk loss of government subsidy. Total incidence of dropout due to failure, but usually other causes, is said to be 7 per cent. About 70 per cent of the successful competitors receive full scholarship aid; 25-30 per cent are responsible for their room and board. Extra stipends are awarded for scholastic excellence. Parents who earn above a certain level of income are expected to contribute toward support of their offspring for higher education. Textbooks are inexpensive, being published with periodic revisions by the RSR *Meridiane* press.

The course of study retains some of the didactic structure that originally emulated the 19th century French pattern of lectures and tutorials, tests and credits. Up to 60 hours a week are devoted to such exercises and laboratory work (with extra time for instruction in scientific socialism). Presently the old curriculum is undergoing change to promote earlier clinical correlation of new knowledge (which is often introduced through student seminars) and earlier contact with patients. During the fifth and sixth years students are given regular assignments on hospital wards with responsibility

for care of patients under supervision of clinical instructors.

Medical library facilities are concentrated in Bucharest and Cluj and to lesser extent elsewhere, except for the occasional personal collection supplied by the individual effort of a specialty department head wherein foreign literature appeared to be selectively represented. Individuals among both faculty and student body expressed eagerness for international exchange of pedagogical and research information, notably toward the expanding horizons of new areas (viz, microbiology, virology, genetics, nuclear medicine, and immunology).

Refresher courses for graduates have been expanded over recent years, consisting of registered participation in series of lectures and demonstrations conducted at regional teaching centers. Similar to continuing graduate education in the USSR⁵ and known as *resiclazioni*, sessions are scheduled regularly at hospitals and polyclinics. Compliance is encouraged by desire for promotion and through accreditation from academic personnel who compose and direct the curricula. Attendance is not expected of elderly or senior institutional physicians or those who have earned the postgraduate MD degree. There are compulsory programs also for midwives and male helpers (*feldshers*).⁶

DISTRIBUTION OF DOCTORS AND MANAGEMENT OF HEALTH CARE

The ministries of health and education strive to achieve an effective physician population ratio relative to geographic demography, aiming to spread doctors and assistants equitably throughout 39 different-sized counties which contain increasing numbers of people who dwell in small municipalities with interspersed among the big cities (ie, Bucharest-Cluj-Constantea), the remainder living in 340 towns and villages and nearly 3000 farming communes who are served at their roots by dispensaries and smaller field teams, sometimes located in the doctor's house. Both such units are echeloned by urban polyclinics and hospitals and several nationwide research institutes (ie, epidemiology or the *Parhon* institute of endocrinology at Bucharest or oncology at Cluj).

Prime effort is directed toward rendering proper treatment to the patient. Telecommunication and motor vehicles are supplemented by a fleet of ambulance planes ("yellow-birds") based at strategic airports. The local physician, assisted by a *feldsher*, a midwife and practical nurse, and usually a pediatrician, is a recent graduate ("extern") who may

(Continued on next page)

allot several hours a day to home visits. Short-stay beds would be available at the dispensary which, with the field team, serves more as an ambulatory health service than infirmary. Personnel in this setting conduct general physical surveys and immunization programs as well as providing temporary custody and ready access to the not-so-distant specialized clinic or hospital with few problems except the usual administrative delays. Pregnant women report usually within the eighth week span and are registered at the nearby polyclinic. About 75 per cent are delivered at home under supervision of experienced midwives. Modern-trained pediatricians are needed. No well-baby clinic was seen; but a few communal child-care centers were noticed in large Bucharest apartment complexes.

The medical district comprises some 5000 inhabitants, anyone of whom can obtain examination at the nearest dispensary, where there would be consultative help available at the district polyclinic, or direct transfer to hospital could be arranged. Moreover, a citizen may go directly to the polyclinic, which is the main center for patient screening and allocation and for follow-up after hospitalization. In the more heavily populated towns several district dispensaries instead of a polyclinic might occupy the same premises that would house, in addition to the basic medical and surgical staff, a gynecologist, perhaps an ophthalmologist or other assigned specialists, dentists, and limited radiologic and laboratory set-ups. In proximity to university centers such services would be utilized for practical instruction of medical students. During recent years of industrial growth, dispensaries have become part of many of the new residential complexes for workers, 22 having been erected around Bucharest since 1962 to accommodate 30,000 persons. The whole nation now has over 5000 compared with 1240 in 1938. The number of polyclinics also has increased from 40 to nearly 450. The large polyclinic, serving a community of several thousand, would simulate in some ways the expanding corporate type of multi-specialty group practice in the U.S.A.

MISCELLANEA

Many persons with insidious symptoms, notably those due to cardiovascular disease or malignancy, will have neglected to seek medical attention and be beyond the range of effective therapy. (There is no Heart Fund or Cancer Society.) Nationwide hygienic propaganda is a need recognized by Ro-

manian internists and oncologists to encourage earlier diagnosis.

Medications are produced and tested under the direction of governmental pharmacologists, but certain drugs must be imported. Most prescriptions are filled free at 4800 pharmacies which dispense an annual volume estimated to be worth \$70,000,000 (1969).

Gerontology has spawned a special agency, although only 12 per cent of the population is reported to be over 60. Pensions are graded beyond stated age limits (men 60-62 and women 55-57) for disability or retirement. Extra benefits accrue through deductions of 2 per cent from wages. The elderly, beyond 65, usually retain a salutary refuge in the rural home. They perform essential chores outside and indoors that contribute to domestic subsistence. This natural transition into old age is not so readily achieved in the urban environment; but many are able to find sometime work for pay or are otherwise welcome in the family circle. There are no private nursing homes. Community hospitals are available for isolated old folk, who may or may not have been pensioned; and custodial shelters with visiting medical attention are maintained for many of those alone or rendered helpless by chronic illness. Participation in handicraft or repair workshops ("ergotherapy") is encouraged in all such governmental establishments, including psychiatric institutes and prisons.

EXPANSION

New specialty hospitals have been added or are being planned. A 500-bed unit for adult neurosurgery is under construction in Bucharest. Several of the floors were up by mid-1972 with activation in prospect two years hence. A similar 300-bed unit is envisaged for children. The present antique "Prof. Dr. D. Bagdasar" neurosurgical building of the Spitalul "Prof. Dr. GH Marinescu" somehow accommodates an average daily census of over 200 by utilizing corridors and corners and putting two patients who can fit together head-to-foot into a convalescent cot (even three or four in the pediatric section). Despite crude furnishings, technologic compromise, and erratic difficulties Prof. C. Arseni and his colleagues perform an average of 50 major procedures during a five-day surgical week on an astonishing variety of conditions with consistently good results.

Examples of recently expanded bed capacity with which teaching programs are being integrated are: Bucharest—4200 (population 1.6 million), Cluj—1500 (190,000) Constantza—1700 (210,-

000). In the larger cities daily bed checks are cross-referenced at central ministry bureaus with respect to general and special services. State investment for health in plant and equipment had been tripled during 1950-70 and became 9.5x higher per capita when total costs of service, medication, and appurtenances were added. Asked about overall expense of their nearly total health-care program, a subminister guessed 6 per cent of the national budget⁷ and mentioned that the usual yearly increases requested by health department officials always had to be cut back. (There is very little medical philanthropy in Romania.) Questions on matters like fee payments to physicians, industrial-accident compensation, health insurance, malpractice litigation, and research support evoked inadequate answers or puzzlement.

With RSR citizenship goes care and fare in all hospitals at low cost (compared with U.S. standards—government or private) wherein average care is adequate (similar to U.S. state or city institutions) despite a lack of sophisticated and expensive modern equipment; but the fare is pitifully meager. By the same token bed baths, back rubs, and other intramural indulgences, which we would regard as routine, are not available. Food supplements from home are welcome, as is family help with the drudgery of nursing chores (customary in many European countries). Moreover, on payment of a reasonable charge a patient may request almost any well-known specialist for consultation, therapy, or both, usually a professor, associate professor, or clinic chief, even one from beyond the district. This is called "enterprise practice" with part of the fee going to the state and the rest to the selected physician.

Reorganization to improve management of medico-surgical emergencies is evidenced by the spread of first-aid stations in rural areas and similar units around factories and schools; also new polyclinics with emphasis on the relative logistics of urgency and transport. Migration of workers into industrial localities, increasing motorcar ownership and mobility, and unregulated extra-urban traffic, especially along poorly illuminated narrow roads, have combined to augment vehicular accidents. Two years of experience at a Bucharest hospital, set up mainly for trauma, demonstrated that patients with multiple-organ-system injuries should be sent where major specialties (ever in short supply) are close at hand; and fully as important, that enforced safety regulations become mandatory along with skilled roadside handling

and competent first-aid as primary steps to allay the human toll of death and maiming from automotive and industrial accidents.

Each district maintains casualty stations located at key points to promote rapid reporting and travel by motor ambulance or airplane (helicopter needed) to adequately equipped and staffed inpatient facilities. The whole plan, though obviously overstretched nationwide, is copied from the decades-old Moscow *Skoraya*⁸ which operates on an instant communication network and has been cited as the most efficient system anywhere for early management of life-threatening urban emergencies.

The tight socialistic economy of Romania tends to keep research oriented and limited in terms of cost and time to clinical problems, as exemplified by the excellent work performed in the oncological institute at Cluj University which concentrates on the pathogenesis of certain types of cancer in relation to therapy. A superb guide and senior surgeon, Dr. A. Bologa, showed his impressive M.D. thesis (equivalent to Ph.D. and sought mostly by academic physicians) which dealt with the vascular histopathology and ultrastructure of liver metastases. (His father—circa 80—is the distinguished Professor of History of Medicine.)

Other examples of practical research were exhibited in the neurosurgical department of Prof. S. Jacob. In situ brain dissections at staged levels of formalinized whole cephalic specimens with tinted injections of blood vessels which demonstrate surgical approaches to intracranial compartments and vascular junctions; also probably the most comprehensive array of clinical studies ever assembled on cerebrospinal fluid crystallography.

OVERVIEW

The foreign observer soon realizes that Romanian health-care is directed toward rendering the best possible treatment to those who need it. This intent is pursued through promotion of access to diagnostic attention and therapeutic application albeit slow and seemingly standardized, but provided at minimal expense to all involved which could hardly be imagined under the U.S. pluralistic system. The latter poses an ambiguity between our free-choice-of-physician creed and the group or institutional direction of patient referral, work-up and treatment. In general contrast, U.S. medicine fosters reduplication and under-use of elaborate specialized services in small hospitals

(Continued on next page)

and, paradoxically, their overuse in large university centers.

Medical personnel are carefully selected in RSR. They are also highly respected and apparently work well with the constraints that accompany governmental management of their profession. A boy and girl doctor frequently join to form a happy medical team marriage, and notably with respect to double income that can provide a better apartment and motorcar and Black Sea vacation. Few of the leaders in the fulltime teaching profession are RSR party members.

The Romanian physician applies a direct approach toward the specific rather than the differential aspects of the patient who becomes his (or her) problem in a non-possessive manner. Consultative opinions can be offered without invitation. Conclusions are sought with only the necessary x-ray studies and laboratory tests. Sophisticated radiographic and isotopic techniques and multiphasic or computerized hemo-chemical studies are not yet available. The tactics of diagnosis and therapy are traditional and methodical; and the overall results are satisfactory, if not spectacular.

Doctor-patient relationship as witnessed during the itinerary reflected genuine interest with objective rather than personal concern and minimal involvement of third parties (including relatives). Average hospital stay is protracted through staff inefficiency (comparable to U.S. military or veterans institutions). Both general and special care appeared to be well planned and performed with minimal paramedical personnel. Staff doctors take regular assignments inspecting kitchens and supervising waste disposal. Difficult cases seemed to get advice and treatment from physicians or surgeons of commensurate knowledge and skill. Random deficits: An understandable lack of the latest technologic aids and medico-surgical instrumentation and a real need for public education about major endemic disease problems; also a paucity of the humane comforts fostered by social service and pastoral work and other amenities that may assuage the despair of illness and impending death. There was little evidence, incidentally, of some of the depravities that contaminate the current U.S. health scene (ie, environmental pollution, ethnic-social violence and crime, dangerous drug addiction and alcoholism). One faculty physician in Cluj remarked, "Prostitution cannot survive here!"⁹

US AND RSR CONTRAST

J. Fry¹⁰ presents an interesting though ingenu-

ous way to depict various systems of medical care delivery by comparing Russia, Britain, and America among "flow plans" which show cross-coordinate deviation between the agglomerated patterns of the USSR (mainly horizontal) and the seemingly rigid ladder of the U.K. when compared with an oversimplistic U.S. pattern. (A Romanian chart is offered (Fig. 1) which simulates that of the USSR). Fry writes a cogent description of the disordered political and financial confusion that confounds current U.S. medical affairs which could scarcely be diagrammed in any flow plan. The explorer of its actual channels would soon get lost among its hidden tides and crosscurrents.

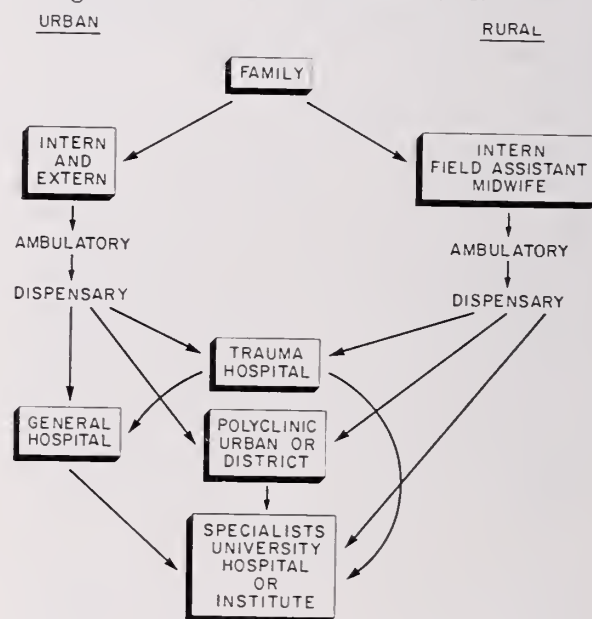


Figure 1

It appears that general medical care for town-village and countryside clientele is probably most accessible and effective in the U.K.; perhaps more so rurally in the USSR and RSR; and least available in the U.S. The latter opinion is derived, for example, from the decline of home visitations by the community medico and his replacement by the specialist in family practice, who is often associated with a corporate group of various specialists serving a populated area, and by the overloaded hospital emergency department or neighborhood health center. The U.S. has a neglected female reservoir for production of fine physicians whose education and training could be subsidized through HEW recruitment and monetary payment under negotiable agreement to practice for awhile where needed. Similar ground rules should be applied to many of the FMGs whose mass immigra-

tion continues to contribute incompetence to U.S. health-care through the myth of physician shortage.¹¹

Freedom of action generated by federal-state or private sources of support stimulates the creativity and diversification that propels the remarkable progress of U.S. medicine. The resultant variety, multiplicity, and value of published and applied clinical and laboratory investigation is sufficient witness thereto. The scientific advantages of forward-looking research and expanding technology obviously favors western medicine, but the efficient demographic implacement and delivery of evenly balanced services in the RSR reflect unfavorably on the disparate distribution in the U.S. of over-specialized and heterogeneous health facilities with respect to population density, individual need, and relative cost, both as to its multi-agency administration and more keenly to its consumers.

Consider the price for special intramural investigations beyond the basic room and board charge: ie, multiple angiographic studies that can demonstrate the vascular pattern of almost all

and skilled nursing supervision with electronic monitoring in special care units and for complex laboratory tests, medications, and rehabilitation devices. Add perhaps the percentage passed on to the consumer ("research and development") from the pharmaceutical and equipment supply houses; also the outlay by the U.S. public—in addition to taxes that support federal, state, and local health programs—for payment of private insurance indemnities offered through the myriad of hospitalization and disability plans (hedged by exceptions and deductions in small print). And top it all off with the time value devoted to desk work on sheaves of redundant paper, including the multiple forms that the doctor (and staff) must fill out (and mail postpaid) to Medicare, Blue Shield, or whatever third party in order to anticipate pro forma payment for an operative procedure or medical service after many weeks of bureaucratic processing.

Comparisons between the complex U.S. pluralistic practice of the art and the RSR unitary system yield many divergent and unresolved impressions. However, despite conflicting political ideologies and major societal differences over health-care organization and delivery in the RSR and U.S., the majority of people so engaged in either nation seem to be committed to what could be accepted as a Galenic axiom: *Sana aegros quam optime* (Heal the sick as best you can).

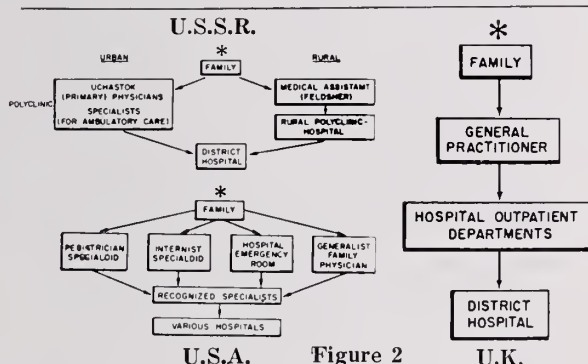


Figure 2. Comparative flow plans of USSR-UK-USA (Reproduced with permission of Dr. John Fry and the publisher of Int J Health Serv.

internal systems; or the inhalation of a short-lived isotopic gas (produced in the hospital cyclotron) for thoracic scan by a detector device; or the instillation of contrast substance or radio-nuclide into body cavity or blood stream in search of skeletal or organ defects; or computerized axial tomography (CAT), the newest cephalic scanning device (UK), which can accurately identify intracerebral spaces and mass lesions. Consider the long-term cost of kidney dialysis or any organ transplant or complicated reconstructive surgery with additional charges for elapsed time on the operating room floor—also for expert anesthesia

REFERENCES AND NOTES

- Dr. Lilya Gontea was a fellow and senior staff anesthesiologist 1972-74 at Children's Medical Center and Boston City Hospital, respectively. Dr. Stanciu awaits approval from RSR Ministry of Health to accept an appointment at Massachusetts General Hospital.
- Dr. Anna Aslan and her "Gerovital H3" See "W" published by *Women's Wear Daily* 3:(13):8, 1974
- Statistical data (usually rounded to the nearest decile) were derived from conversations with officials at the Ministries of Health and Education or taken from government publications. *Romania Public Health*, Meridiane Publishing House, Bucharest, 1968
- Vade-mecum of Medico-Sanitary Statistics, Ministry of Health, RSR, 1969
- Storey PB: Continuing Medical education in the Soviet Union. *N Engl J Med* 285:437-42, 19 Aug 71
- Sidel VW: Feldschers and "Feldscherism:" The role and training of the feldscher in the USSR. *N Engl J Med* 278:934-9, 25 Apr; 987-92, 2 May 68
- Another informer indicated 8% as a more accurate estimate which would include expenditures for medical education, new construction of hospitals or health facilities, drugs, and ancillaries.

(Concluded on page 33)

Cystinosis: A Review

Intracellular Deposition Of Crystals Results In Renal Damage And Ulti- mately In Uremia.

By Chong M. Kong*

Cystinosis is a disease characterized by the presence of cystine crystals in most internal organs, but the clinical manifestations of which depend almost entirely upon the renal functional alterations resulting from the deposition of this aminoacid in renal tissue. The renal abnormalities which ultimately lead to renal failure, at first affect primarily tubular dysfunction: cystinosis is now regarded as the single most common cause of Fanconi syndrome in children, and at one time cystinosis and the Fanconi syndrome were thought to be the same disease.

Whereas generalized aminoaciduria occurs in cystinosis as a result of tubular damage, in cystinuria (a syndrome of completely different pathogenesis) the primary defect resides in a decreased capacity of the kidney to reabsorb cystine, lysine, arginine and ornithine. In cystinuria there is no generalized aminoaciduria, and the disease is characterized by the formation of recurrent cystine stones; no intracellular deposits of cystine are observed.

CLASSIFICATION

Although at first only the most severe cases of the disease were recognized, it is now well established that cystinosis may achieve a different degree of severity, and three forms have been described.

*Student (deceased), Brown University Program in Medicine.

The best known form of this disease is that which affects very young infants, and which is recognized early because of the obvious alteration in renal function. This form has also been called the "nephropathic variety". Affected infants usually appear normal for the first six months of life; then, probably as a consequence of the increasing deposition of the aminoacid in the kidney, evidence of proximal tubular impairment develops. Polyuria and polydipsia, and consequently frequent episodes of dehydration and unexplained fever, are common presenting manifestations. By the age of one year other and more severe complications of tubular dysfunction appear: these include renal glycosuria, generalized aminoaciduria with phosphaturia and hypokalemia, metabolic acidosis, rickets, and growth retardation. Failure to thrive is another relatively common mode of presentation. With the passage of time azotemia appears. With careful medical management of the acidosis and renal rickets some of these children may live to their eighth or tenth year. However, by then renal failure and increasing azotemia is almost universal with almost all patients dying by the age of ten.

The second form of the disease is the adult, or benign variety. In these cases the diagnosis is usually accidental, since these individuals are almost always asymptomatic. This is probably due to the fact that although cystine is deposited in

almost all internal organs, the kidney is spared for unknown reasons.

Finally, an intermediate form, that of adolescent cystinosis, has been described. These patients develop the same form of complications as those seen in childhood cystinosis, but the manifestations occur later in life: diagnosis is usually made around the sixth year of life, and the patients usually survive into the second decade.

MECHANISMS OF INHERITANCE

The childhood form of cystinosis occurs in approximately equal numbers in males and females, and frequently several members are affected in each family. Since direct transmission from parent to child has never been observed, it is believed that the mode of transmission is autosomal recessive. Heterozygous carriers have been reported to have somewhat elevated cystine concentration in cells, but they are asymptomatic and can be diagnosed only in the course of genetic studies. The adolescent variety has been described in a few cases only; although less virulent, it may be fundamentally the same disease as the childhood form and have the same mechanism of transmission.

The adult benign form also has been described in several siblings, without appearing either in the parents or the children of affected members. Leitman suggests that this disorder is a benign condition, possibly caused by a completely different mutation and with different genetic transmission from the nephropathic variety.

LOCALIZATION OF CYSTINE CRYSTALS AND BIOCHEMISTRY

In patients with the nephropathic variety the intracellular concentration of free cystine is approximately 100 times higher than normal; it is 30 times higher than normal in patients with the benign form, and about six times higher than normal in heterozygote carriers. By contrast, plasma cystine levels are not elevated in any of the above conditions.

The intracellular deposition of cystine crystals has been further localized to membranous subcellular particles, similar to lysosomes. The mechanism whereby cystine accumulates in these structures is still subject to debate. Cystine concentration could increase because of faulty degradation; however, Patrick et al have shown that homogenized autopsy tissue obtained from cystinotic patients contains normal activity of enzymes which catabolize cystine. Another possible pathogenetic mechanism, which takes into account the localization of cystine in lysosome-like structures, would

be the presence of a defect in the transport system responsible for the removal of cystine from a membrane-enclosed subcellular structure to the cytoplasm. However, evidence of any such impairment has not been demonstrated. Finally, the presence of excessive intracellular sulfhydryl-oxidizing capacity has been implicated. In this regard it is interesting to note that Patrick et al have reported that many of the sulfhydryl-dependent enzymes in the kidney are inhibited by the presence of increased amounts of sulfhydryl-reactive groups. However, it is not clear whether this observation applies to the intracellular accumulation of the amino acid.

The long-term results of renal transplantation in cystinotic patients (see below) indicate that, whatever the ultimate defect may be, it probably is inherent within cells, and not dependent on humoral factors. In view of the demonstration that in normal humans and rats the intracellular concentration of cysteine is much higher than that of cystine, it is likely that accumulation of cystine in affected patients is related to an inability of the cells of these patients to maintain cysteine in its reduced form (see figure).

DIAGNOSIS

The diagnosis of cystinosis is usually suspected in children who present with a history of failure to thrive, with dehydration and polyuria, with the findings of rickets, or with the consequences of the Fanconi syndrome. These include metabolic acidosis with normal anion gap, renal glycosuria, generalized aminoaciduria, phosphaturia, uricosuria, and hyperkaliuria: in short all of the hallmarks of impaired proximal tubular reabsorption. Confirmation of the diagnosis depends on the demonstration of intracellular cystine crystals. The organs which are most accessible are of course those which are most frequently used for such demonstration: cystine crystals may be seen by corneal slit lamp examination, or by microscopic examination of cells obtained from conjunctival, bone marrow, or lymph node biopsies, or from examination of peripheral lymphocytes or cultured fibroblasts.

TREATMENT

Conservative treatment has been directed toward the amelioration of the consequences of the Fanconi syndrome, and it is effective in prolonging survival and well-being so long as renal failure is of only a moderate degree. Metabolic acidosis may be controlled by the administration of alkalizing sodium and potassium salts. The anion of

(Continued on page 30)

The Nephrotic Syndrome

Is Manifestation Of Increased Glomerular Capillary Permeability Due To Primary Renal Disease Or Renal Involvement In Systemic Disease.

By Sewell I. Kahn, M.D.

The nephrotic syndrome is a relatively common consequence of increased glomerular capillary permeability; it may occur as part of the renal involvement in systemic diseases or as the isolated manifestation of primary renal disease. Therapeutic approach and ultimate prognosis depend on the underlying etiology, as well as on the presence or absence of impairment of renal excretory function.

PATHOPHYSIOLOGY

Increased glomerular capillary permeability results in albuminuria and, depending on whether protein synthesis by the liver can compensate for the protein loss, hypoalbuminemia. Hyperlipemia and lipiduria may accompany hypoproteinemia. Since serum albumin plays a major role in serum oncotic pressure, its loss results in increased transudation of intravascular fluid to the interstitial space. The lowered intravascular fluid volume stimulates all mechanisms which tend to increase retention of dietary salt, resulting in edema.

DIAGNOSIS

Since hypoproteinemia, hyperlipemia, lipiduria, and edema are variable components of the syndrome (depending on concurrent protein and lipid synthesis and on exogenous salt intake), the only *sine qua non* for the diagnosis is the demonstration of the presence of more than 3.5 g of albumin in a

24-hour collection in adults, or correspondingly lower amounts in children. Variations in the amount of albuminuria are also the only useful guideline to monitor the spontaneous course of the disease or to detect whether therapy directed at the underlying cause is effective in altering glomerular permeability. Patients with tubular or interstitial diseases may have small amounts of proteinuria, and patients with multiple myeloma may excrete large amounts of low molecular weight proteins (Bence-Jones protein) in the urine. However, these do not represent increased glomerular permeability and therefore do not constitute nephrotic syndrome.

PRESENTATION

Nephrotic syndrome most commonly presents with the appearance of peripheral edema. It may however be discovered by routine urine analysis in an asymptomatic patient or in a patient with extrarenal manifestation of the underlying systemic disease. In childhood it may present with abdominal pain secondary to pneumococcal peritonitis, which must be differentiated from appendicitis. Rarely, nephrotic syndrome may present with hypotension and shock in some cases with severe decrease in intravascular volume.

ETIOLOGY

In children the most common cause of nephrotic syndrome is the so-called "minimal change disease." In adults secondary nephrotic syndrome predominates. It should be recognized, however, that minimal change disease does occur in the

SEWELL I. KAHN, M.D., *Associate Director, Division of Renal Diseases, Rhode Island Hospital.*

This is one of a series of papers supported by the Continuing Education Program of the Rhode Island Health Sciences Education Council.

TABLE I
ETIOLOGIC CLASSIFICATION OF
NEPHROTIC SYNDROME

SECONDARY

- | | |
|---|---|
| A) To Systemic Diseases: | Diabetes Mellitus
Amyloidosis |
| B) To Glomerulitides: | Acute Poststreptococcal
Glomerulonephritis
Subacute Bacterial
Endocarditis
Systemic Lupus
Erythematosus
Vasculitides
Henoch Schoenlein
Syndrome
Others |
| C) To Increased "Back Pressure": | Constrictive Pericarditis
Renal Vein Thrombosis
Severe Congestive
Heart Failure |
| D) To Infectious Diseases: | Syphilis
Malaria
Others |
| E) To Malignant Hypertension | |
| F) To Toxins (heavy metals, trimethadione, penicillamine) or allergenic stimuli (bee stings, vaccinations) | |

PRIMARY OR IDIOPATHIC

- "Minimal Change Disease" (also called Nephrotic Syndrome of Childhood, Lipoid Nephrosis)
Membranous Glomerulonephritis
Proliferative Glomerulonephritis
Membrano-Proliferative Glomerulonephritis
Focal Glomerulonephritis
Other Glomerulonephritides (lobular, mesangioproliferative)

adult and that secondary nephrotic syndrome can occur in children. (See table.)

THErapy

1) *Etiologic*: In the nephrotic syndrome of minimal change disease, prednisone in large doses (2 mg/kg/day, up to 100 mg/day) is usually effective in controlling proteinuria within 3 to 4 weeks. Recurrences are, however, frequently observed when steroids are tapered or discontinued. With the development of steroid side effects or steroid dependency, immunosuppressive drugs (such as cyclophosphamide) may be used. Steroids and immunosuppression may also be of help in the nephritis of Systemic Lupus Erythematosus and of vasculitides. Antibiotics may eradicate the problem in the glomerulonephritis of Subacute Bacterial Endocarditis. Surgery or medical management can help in the nephrotic syndrome of back pressure. Withdrawal of offending agents usually results in improvement when exogenous toxins or allergens are identified.

2) *Symptomatic*: Low salt diet and diuretic

agents are frequently required for control of edema. The infusion of oncotic materials (preferably salt-poor albumin) may be necessary in cases with severe intravascular volume depletion.

DIAGNOSTIC AND THERAPEUTIC APPROACH

Since the occurrence of steroid-responsive nephrotic syndrome is more common in children, the approach differs depending on the age of the patient. In all patients, renal function should be assessed by obtaining a serum creatinine and nephrotic range proteinuria confirmed with a 24-hour urine collection.

In children: 1) Rule out acute glomerulonephritis and systemic diseases (check list: history of streptococcal infection; presence of systemic symptoms, and rash, purpura; high blood pressure; presence of hematuria and cylinduria; antistreptolysin O (ASO) titer; lupus erythematosus (LE) cell preparation; ANAB; serum complement level. 2) Trial of steroid therapy. 3) Renal biopsy (light microscopy, electron microscopy, immunofluorescent staining) if steroids are ineffective or if frequent recurrences with steroids side-effects occur.

In adults: 1) Rule out systemic diseases (check list: history and physical examination to rule out congestive heart failure and pericarditis; glucose tolerance test and funduscopy to rule out diabetes mellitus; Bence-Jones protein or urine electrophoresis; serum protein electrophoresis; ANAB, VDRL; urine sediment; serum complement level; ASO titer). 2) Renal biopsy (light microscopy, electron microscopy, immunofluorescent staining). 3) Steroid or immunosuppressive therapy, or both only if indicated.

It should be stressed that the above remarks are directed primarily to the patient without evidence of renal insufficiency and that both adults and children with renal insufficiency require a complete evaluation and may need supportive therapy in addition to treatment of the nephrotic syndrome.

REFERENCES

- ¹White RHR, Glasgow EF, et al.: Clinicopathological study of nephrotic syndrome in childhood. *Lancet* 1:1353-59, 27 Jun 70
- ²Smith RF, Gonick H, et al.: The nephrotic syndrome: current concepts. *Ann Intern Med* 76:463-77, Mar 72
- ³Schreiner GE: The nephrotic syndrome. In *Diseases of the Kidney*, edited by Strauss MB, Welt LG. Second Edition. Boston, Little, Brown and Company, 1971 P. 503-636



Editorial

HEALTH CARE CRISIS

The criers of doom have long been shouting about an impending crisis in health care. When disaster struck, it came from a source not foreseen by the politicians and irrational critics of the medical profession. The national television networks as this is written are covering hearings being held in New York to find a solution for the malpractice insurance collapse in that State.

According to HEW Secretary Caspar W. Weinberger, as quoted in a recent issue of the *WALL STREET JOURNAL*, physicians in at least seven states face the prospect of being unable to obtain malpractice insurance coverage when their current policies expire. Weinberger has called a special conference on the subject, and a select committee of the New York state legislature is holding hearings with a view to proposing remedial legislation.

While the situation has been critical in many areas, it is the impending collapse in New York which has really brought matters to a head. In 1973 the New York State Medical Society was notified by its insurer, Employers Mutual Liability Insurance Company of Wisconsin, that the company was withdrawing from the program. The society arranged a new contract with Argonaut Insurance Company of California which entailed a rate increase on all prevailing premiums of 93.5 per cent. Argonaut now claims that this increase was not enough and that, based on a review of "recently updated claims expenditure supplied to us from the previous insurer," it would require an increase of 196.8 per cent "effective immediately." It further warned that, unless the New York State Insurance Department approved a rewording of the contract to reduce claims exposure, it would not renew or issue new policies after next June 30 (1975).

In New York the average general practitioner currently pays about \$3500 for malpractice coverage. Under the new rates this would rise to over \$10,000. Orthopedic and neurological surgeons would be obliged to pay up to \$55,000 or \$60,000, a confiscatory rate. A New York insurance official observed that "It is possible for a New orthopedic surgeon to be faced with paying more in insurance premiums in his first year than he could earn in his first few years of practice." Alarmed by this outrageous situation, the New York State Insurance Department took the rare step of suspending

the new rates pending a hearing.

On the national scene Dr. Roger O. Egeberg at the request of Weinberger is heading a study group which is preparing contingency plans which include some type of federally sponsored coverage for physicians whose insurance has been cancelled by private insurers.

Faced with the fact that physicians will refuse to practice in certain areas because of the cost of insurance and that ultimately the public pays the bill for insurance costs and defensive medicine, various responsible groups are beginning to take action.

Weinberger has described the national problem as of "crisis proportions" and added "we have a responsibility to see that no situation persists which seriously threaten the ability of . . . persons to obtain health care." If malpractice insurers wish to pool resources to insure high risk physicians, his department will "try to secure prompt anti-trust clearance."

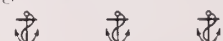
The American Arbitration Association has recently announced receipt of a grant of \$60,000 jointly provided by the Henry J. Kaiser Family Foundation and the Commonwealth Fund to support a study of medical malpractice dispute settlement systems now in use, and to recommend alternative systems.

Among the suggestions under consideration are no-fault, mandatory arbitration of disputes, shortening of the statute of limitations, various types of state or federal programs, or limits on certain types of claims.

The mediation panels introduced in New York are of uncertain effectiveness. The strangest omission from the *WALL STREET JOURNAL* article was mention of the powerful impact of contingency lawyers fees on the whole malpractice nightmare.

Lawrence O. Monin of the New York State Insurance Department has stated: "Unless the situation has a dramatic turnabout, which I don't expect, or unless the system is radically changed, the costs of providing coverage will continue to rise."

Radical change is long overdue. Perhaps the crisis proportions of the current debacle in New York with its ready visibility to the national news media will bring about the necessary changes.



Editor's Mailbox

To the Editor:

Thanks for your timely editorial ("Too Many Eat Too Much," RHODE ISLAND MEDICAL JOURNAL, November 1974). Every Rhode Island doctor should cut out your masterpiece and place it on his waiting-room table. I did just that and typed

the following at the bottom of the page: "The amount of food used to feed one American would feed more than seven Chinese."

E. A. BOWEN, M.D.
 Chepachet, R. I.



Will You Support The Rhode Island Professional Standards Review Organization, Inc.?

OVER 900 PHYSICIANS HAVE JOINED!!

The officers and the Board of Directors of R.I.P.S.R.O., Inc. have applied to the Secretary of Health, Education and Welfare for designation as the PSRO for the Rhode Island area and have received a planning grant to qualify as a conditionally designated PSRO. Under the law, a "substantial portion" of all physicians in the area must be members of R.I.P.S.R.O.

It is our hope that you will agree with the approach of the officers and directors of R.I.P.S.R.O., a peer review organization controlled and directed by a committee of licensed physicians. Even though you may not agree with the basic concept of PSRO itself, we hope that you will give your support by requesting membership in R.I.P.S.R.O. There are no dues, fees or other monetary obligations involved.

Dr. Alton M. Paull
 President — R.I.P.S.R.O., Inc.

Dr. Alton M. Paull, President
 R.I.P.S.R.O., Inc.
 106 Francis Street
 Providence, Rhode Island 02903

Dear Doctor Paull:

I agree with the general approach of the officers and Board of Directors of R.I.P.S.R.O., Inc., a physician controlled and directed organization, and wish to support that organization as long as it shall be controlled by the physicians of Rhode Island.

.....
Signature	Address
.....
Name Printed	Date

Hopkins

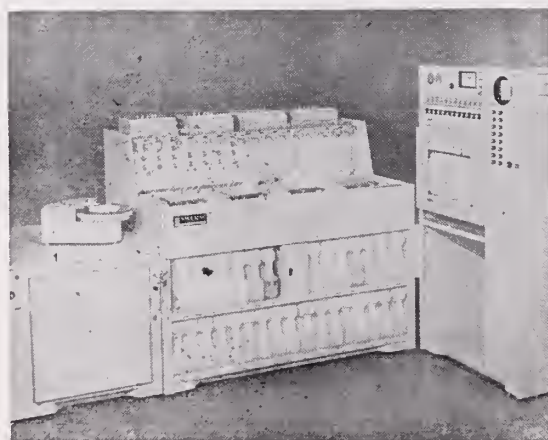
Profile "20"

Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

CYSTINOSIS: A REVIEW

(Continued from page 23)

such compounds may be bicarbonate, but citrate or glutamate salts are usually better tolerated; the cation will be sodium and potassium in proportions dictated by the severity of potassium depletion. Large amounts of these compounds, in the order of magnitude of several hundred millimoles per day, may be needed to maintain plasma bicarbonate concentration within reasonable ranges.

Renal rickets is treated with the administration of calcium salts and vitamin D or one of its derivatives. With the onset of renal failure, phosphate lowering agents, such as Amphojel®, may be required.

Attempts to lower the intracellular cystine concentration pharmacologically have so far been disappointing. These have centered on the use of penicillamine, dimercaprol, or dithiothreitol (DTT). The use of penicillamine was suggested by the observation that this drug reacts irreversibly with compounds containing suhydryl groups, and that the compound cystine-penicillamine is readily excreted by the kidney; however, in view of the normal plasma cystine concentration in cystinotic patients, it is not surprising that this approach failed to result in long-term reduction of intracellular cystine accumulation. DTT, which has been claimed to be able to dissolve crystals of cystine in the bone marrow of cystinotic patients, is a sulfhydryl-reactive compound which has been thought to be capable of reducing cystine to cysteine. Its beneficial effects however are still unconfirmed. Another therapy has relied on using a diet with severely restricted supplies of sulfur-containing aminoacids (cystine, cysteine, methionine). Although it has been claimed that this may result in a decrease in the amount of cystine present in the cornea of such patients, the diet is difficult to tolerate and to prepare, and it is not clear whether the long-term prognosis can be improved by this means.

After renal failure develops, or if the metabolic effects of the Fanconi syndrome are uncontrollable, renal transplantation may be the only available therapeutic avenue, since it is generally accepted that long-term hemodialysis in children is not consistent with adequate growth and performance. Unfortunately, to date the published experience with transplantation is rather limited. Eight reported patients whose course was studied could be evaluated. All of them received a renal allograft

when they had reached end-stage renal failure at the age of eight to ten years. One of these patients died almost immediately because of sepsis; an additional patient, who had received a renal allograft from a cadaveric donor, rejected his kidney promptly. The remaining six, five of whom were transplanted with related live donor kidneys, were followed for a period ranging from one month to four years. None of these patients developed evidence of recurrence of aminoaciduria, phosphaturia, or glycosuria, and glomerular filtration rate (GFR) was normal in all (from 73 to 130 ml/min) except for one who had a GFR of 41 ml/min. It is obvious that these results compare favorably with most series of renal transplantation.

The observation that the renal allograft does not appear to follow the natural course of the disease as it is expressed in the original kidney is of great interest from a therapeutic viewpoint and may shed some light on the pathogenesis of the disease as well. It should be noted that in the natural history of the disease nephropathic changes can usually be detected by six months of age and become obvious by one year; even if it is assumed that the pathologic process consisting of intracellular cystine deposits begins during fetal life, it would take no more than 12 to 18 months before the disease becomes detectable. By contrast, in transplanted organs observed for at least 20 months and as long as 44 months, clinical and laboratory observations have failed to demonstrate renal damage due to cystine deposition. Biopsies of the transplanted organs have also failed to reveal the classical changes, consisting of cystine deposits which first appear within proximal tubular cells and subsequently in glomerular and mesangial cells, and ultimately result in glomerulosclerosis and the so-called "swan neck" deformity in the proximal tubule. By contrast, only moderate cystine deposits have been found in allografts, and these were limited to interstitial cells. These cells are believed to originate from inflammatory cells of recipient origin which have infiltrated the transplanted organ and then have become permanently lodged in the interstitium of the donor kidney.

Following renal allotransplantation, and despite the necessary use of immunosuppressive agents, all children who retained the allograft improved their performance markedly; in most cases linear growth was restored, and the children were able to compete successfully in school with normal children of their own age. Anemia was also rapidly

(Concluded on next page)

POOLS BY AQUA FUN

**BUILDERS IN THE ART OF
CUSTOM POOLS**

Specializing In

**ONE PIECE FIBERGLASS POOLS —
NO SEAMS**

WITH SELF CLEANING POOL SYSTEMS

FREE FORMS —

DESIGN YOUR OWN POOL

VISIT OUR INDOOR DISPLAY POOL

**384 Atwood Ave., Rt. 5
Cranston, R.I.**

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

**178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512**

Pharmacy License No. 225

FOR SALE — CHALET

LOON MOUNTAIN, N.H.

4 Bedrooms and Loft, Living Room with Fireplace, 2 Full Baths, Kitchen, Furnished — 1 Acre Site with Panoramic View. Owner will finance — Excellent tax shelter.

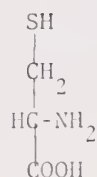
LOW 60'S

Weekdays 272-2900

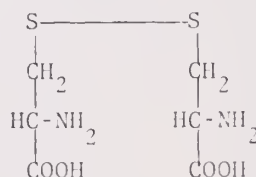
reversed; the continued presence of cystine crystals within other organs has not as yet been the cause of detectable organ impairment.

SUMMARY

Cystinosis is a rare hereditary disease, characterized by intracellular deposition of cystine crystals. Clinical manifestations are usually linked to renal damage, which results at first in the Fanconi syndrome and later in uremia. Medical treatment is supportive and may prolong survival, but renal transplantation appears necessary with the development of renal failure. The results of transplantation have been encouraging. Evaluation of donor kidney several months after transplant is consistent with the interpretation that the original defect leading to cystinosis is an intracellular inability to maintain cysteine in its reduced form.



Cysteine



Cystine

NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY

215 Waterman Avenue

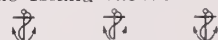
East Providence, Rhode Island

Tel. 438-0660

REFERENCES

- ¹Schulman JD: Cystinosis. DHEW Publication # (NIH 72)249. Washington, U. S. Government Printing Office, 1973
- ²Rosenberg LE, Scriver CR: Disorders of amino-acid metabolism in *Duncan's Diseases of Metabolism*. Sixth edition. Edited by PK Bondy, Philadelphia, W. B. Saunders Co. 1969, 1:366-515. Vol. 1
- ³Cogan DG, Kuwabara T, et al.: Cystinosis in an adult. *JAMA* 164:394-6, 25 May 57
- ⁴Lietman PS, Frazier PD, et al.: Adult cystinosis—a benign disorder. *Amer J Med* 40:511-17, Apr 66
- ⁵Patrick AD: The degradative metabolism of L-cysteine and L-cystine in vitro by liver in cystinosis. *Biochem J* 83:248-56, May 62
- ⁶Crawhall JC, Segal S: The intracellular ratio of cysteine and cystine in various tissues. *Biochem J* 105:891-6, Nov 67
- ⁷Brigham MP, Stein WH, et al.: The concentrations of cysteine and cystine in human blood plasma. *J Clin Invest* 39:1633-8, Oct 60
- ⁸Korn D: Demonstration of cystine crystals in peripheral white blood cells in a patient with cystinosis. *New Engl J Med* 262:545-8, 17 Mar 60
- ⁹Patrick AD, Lake BD: Cystinosis: electron microscopic evidence of lysosomal storage of cystine in lymph node. *J Clin Path* 21:571-5, Sep 68
- ¹⁰Schneider JA, Rosenbloom FM, et al.: Increase free-cystine content of fibroblasts cultured from patients with cystinosis. *Biochem, Biophys Res Commun* 29:527-31, 30 Nov 67
- ¹¹Hambraeus L, Broberger O: Penicillamine treatment of cystinosis. *Acta Paediat Scand* 56:243-8, May 67
- ¹²Goldman H, Scriver CR, et al.: Use of dithiothreitol to correct cystine storage in cultured cystinotic fibroblasts. *Lancet* 1:811-12, 18 Apr 70
- ¹³Clayton BE, Patrick AD: Use of dimercaprol or penicillamine in the treatment of cystinosis. *Lancet* 2:909-10, 21 Oct 61
- ¹⁴Crawhall JC, Lietman PS, et al.: Cystinosis. Plasma cystine and cysteine concentrations and the effect of D-penicillamine and dietary treatment. *Amer J Med* 44:330-9, Mar 68
- ¹⁵Lucas ZJ, Kempson RD, et al.: Renal allotransplantation in man. II. Transplantation in cystinosis, a metabolic disease. *Amer J Surg* 118:158-68, Aug 69
- ¹⁶Mahoney CP, Striker GE, et al.: Renal transplantation for childhood cystinosis. *New Engl J Med* 283:397-402, 20 Aug 70
- ¹⁷Lawson RK, Campbell RA, et al.: Renal transplantation in infants and small children. *Transplant Proc* 3:358-60, Mar 71
- ¹⁸Briggs WA, Kominami N, et al.: Kidney transplantation in Fanconi syndrome. *New Engl J Med* 286:25, 6 Jan 72
- ¹⁹Hambridge KM, Goodman SI, et al.: Accumulation of cystine following renal homotransplantation for cystinosis. *Pediat Res* 3:364-5, 1969

Address correspondence to: Serafino Garella, M.D., Division of Renal Diseases, Rhode Island Hospital, Providence, Rhode Island 02902.


ONE SENTENCE ESSAY

There are no such things as pure and applied science — there are only science and the applications of science.

. . . Louis Pasteur.

A LOOK AT ROMANIAN HEALTH-CARE ORGANIZATION-EDUCATION-PRACTICE

(Concluded from page 23)

- ⁸Storey PB, Roth RB: Emergency medical care in (Not to be compared with the 3.5% of GNP cited for the USSR by Muller JE, et al.: The Soviet health system—aspects of relevance for medicine in the United States. *N Engl J Med* 286:693-702, 2 Aug 71
- ⁸Storey PB, Roth RB: Emergency medical care in the Soviet Union. A study of the Skoraya. *JAMA* 217:588-92, 2 Aug 71
- ⁹Nolo credere.
- ¹⁰Fry J: Medical care in three societies. *Int J Health Serv* 1:121-33, May 71. See Table 1, p. 133 for comparative figures on medical resources. These estimates indicate some of the differences between demographic availability of health services (USSR and RSR) and medical center elitism (US)
- ¹¹Weiss RJ, et al.: Foreign medical graduates and the medical underground. *N Engl J Med* 290:1408-13, 20 Jun 74; The effect of importing physicians—return to a pre-Flexnerian standard. 290:1453-58, 27 Jun 74



AMA-ERF

More students than ever before are resorting to AMA-ERF's "Loan of Last Resort," according to Mrs. C. M. Lessenden, Jr., national AMA-ERF chairman. Because of a decrease in federal grants and fewer subsidized interest loans, medical students without collateral are turning to the Student Loan Guarantee Program where the AMA acts as cosigner on the student's note. Greater use of the loan program makes it increasingly important for physicians and their wives to support the AMA-ERF program. Mrs. Lessenden urges auxiliaries to *strive for \$15 or more per capita* during 1974-75. "Remember," she says, "giving through AMA-ERF is an investment in medicine's future."

Medical students may obtain applications for AMA-ERF loans from their dean's office; interns and residents should contact the hospital administrator. Only interest charges must be paid during the period of training, with payments on the principal deferred until completion. Repayment, tailored to the individual, enjoys great flexibility, may be spread over a period of up to ten years, or paid off quickly without penalty. In Rhode Island since 1962, 55 loans have been granted—totaling \$64,850.

BELLE CALENDIA

AMA-ERF R. I. Chairman

Introducing NUVEEN TAX-EXEMPT BOND FUND

Check-a-Month Plan Series 60

The coupon below will bring information on how to obtain income which is entirely exempt from Federal income taxes, in the opinion of counsel. This new series consists of 200,000 units—each of which offers you a share in a \$20,000,000 par value portfolio of professionally selected municipal bonds. The Fund's chief objectives are conservation of capital and tax-free return. Participants receive a monthly check for their proportionate share of the tax-free interest. For a free prospectus, call or write your nearest Nuveen office or:

WAYNE E. CROSS

1349 West Shore Road, Warwick, R. I.—738-4574
representing

INVESTORS DIVERSIFIED SERVICES

Please send me information of the Nuveen
Check-a-Month Plan.

Name _____

Address _____

City _____

Telephone _____

State _____

Zip _____

NUVEEN
TAX-EXEMPT
BOND FUND



Copies of the Prospectus may be obtained in any State only from a dealer which may offer these Units in such State.

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue

Cranston, R. I. 02920

(401) 943-1884

Book Review

THE PHYSIOLOGICAL BASIS OF STARLING'S LAW OF THE HEART: Ciba Foundation Symposium 24 (new series). Elsener. Excerpta Medica. North Holland 1974

Ernest H. Starling (1866-1927) is remarkable in the annals of physiology for two basic laws which bear his name. One elucidated the biophysical basis for the diffusion of fluid to and from the connective tissue spaces. The other, the subject of this symposium, is, in Starling's words,

"the law of the heart . . . that the mechanical energy set free on passage from the resting to the contracted state depends on the area of 'chemically active surfaces' i.e., on the length of the muscle fibre".

This volume comprises a series of papers and relevant discussion, dealing with further investigations into the fundamental physiochemical processes responsible for this phenomenon.

As is so often the case in the history of scientific discoveries, Starling's axiom represented the culmination of observations dating as far back as the monumental treatise of William Harvey in 1628, elaborated by Stephen Hales in 1704, and developed by a sequence of physiologists, especially O. Frank (1895), in the 19th and early 20th centuries. If the law were to be inclusively eponymic it would bear a baseball line-up of nine distinguished names!

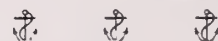
The 31 contributors, including physiologists, biophysicists, and pharmacologists, describe current researches into the basic properties of cardiac muscle. A variety of parameters, representing the particular orientation of the investigators, are utilized. These include the measurement of sarcomeres morphologically and functionally, using light diffraction, cinemicrography, and electron microscopy. The effect of the geometry of the heart itself is explored theoretically in one and two dimensional models.

Presentation of associated heart muscle phenomena—adaptation to changes in heart rate (Bowditch effect) and a positive inotropic effect with an abrupt increase in pressure (Anrep effect)—are included in the paper on homeometric regulation.

Much of the material is highly specialized and requires a biophysical background for adequate appreciation. One can speculate upon possible clinical extrapolations of these basic studies, but in only one paper is there significant reference to their importance in disorders of cardiac function.

Clinically-oriented investigators may find leads, however, warranting further exploration in disease states.

IRVING A. BECK, M.D.



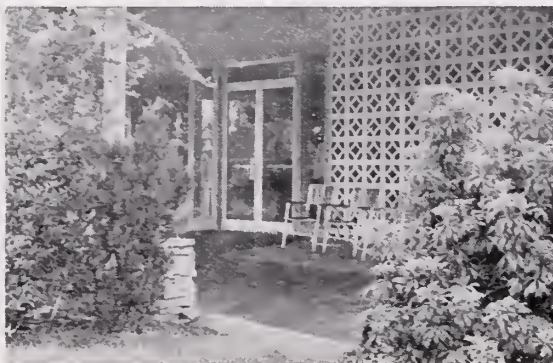
ONE SENTENCE ESSAY

Playing tennis does not call for much more caloric expenditure than ironing, polishing a floor, or dancing.

. . . Richard Gubner, M.D., MEDICAL TRIBUNE.

HEALTH HAVENS

A SKILLED NURSING HOME
Medicare Participating



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed
100 Wampanoag Trail East Providence
Tel. 438-4275
JCAH Accredited

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
Hopkins 7-8050



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started.

In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare.

Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced.

Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment (polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. Prophylactically, the ointment may be used to prevent bacterial contamination of burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have known hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where

absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

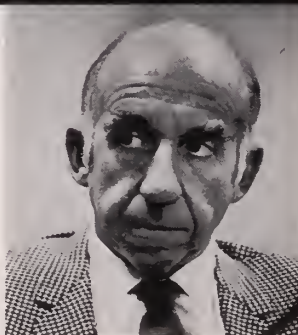
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent film produced by the pharmaceutical industry. When they function in thi

Opinion
&
Dialogue

He a Source of Information?

Yes, with certain reservations. The average sales representative is a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. I go without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—i.e., the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005



PERIPATETICS

(Concluded from page 31)

sociation for Health, Physical Education, and Recreation.

* * *

J. D. KEITH PALMER was appointed to a National Committee on Social and Environmental Aspects of Rehabilitation at the recent American Congress of Rehabilitative Medicine. He will serve as Chairman of the section on Transportation and Architectural Barriers.

* * *

STEPHEN R. KAPLAN is the Program Director of the New Arthritis Clinical Research Center which will be located at Roger Williams Hospital. The program will be operated in cooperation with Brown University.



MEMOS

The Woman's Auxiliary to the Providence Medical Association held their fall meeting recently.

Following the luncheon an auction was held to benefit the Medical Student Scholarship Fund.

MRS. DANIEL CALEDA
President

* * *

Mrs. Lillian Harris, the founder of the Woman's Auxiliary to the Rhode Island Medical Society and its first president in 1945, passed away in September at the age of 89. She is survived by her husband, Dr. Herbert Harris, one son and a daughter and three grandchildren.

* * *

The Woman's Auxiliary to the Providence Medical Association Medical Student Scholarship Fund has a small amount of monies available for a medical student, who is a Rhode Island resident in need of financial aid. The student must have finished one semester in an AMA accredited medical school and be in good academic standing in his or her class.

Inquiries may be sent to W.A.P.M.A., c/o Rhode Island Medical Society, 106 Francis St., Providence, R. I.



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Disruptive anxiety usually meets its match here.

Often effective when reassurance and counseling are insufficient.
Three dosage strengths to meet most therapeutic needs.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions:

ORAL: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six.

INJECTABLE: Keep patients under observation, preferably in bed, up to three hours after initial injection; forbid ambulatory patients to operate vehicle following injection; do not administer to patients in shock or comatose states; use reduced dosage (usually 25 to 50 mg) for the elderly or debilitated and for children age twelve or older.

ORAL AND INJECTABLE: Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating compounds such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual



precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduc-

tion; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. **Oral: Adults:** Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. **Geriatric patients:** 5 mg b.i.d. to q.i.d. (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

Supplied:

Oral: Librium® (chlordiazepoxide HCl) Capsules—5 mg, 10 mg, 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50, available singly and in trays of 10.

Libritabs® (chlordiazepoxide) Tablets— 5 mg, 10 mg and 25 mg—bottles of 100 and 500.

Injectable: Librium® (chlordiazepoxide HCl) Ampuls—Duplex package consisting of a 5-ml dry-filled ampul containing 100 mg chlordiazepoxide HCl in dry crystalline form, and a 2-ml ampul of Special Intramuscular Diluent (for I.M. administration). Before preparing solution for I.M. or I.V. administration, please consult package insert for instructions on preparation and administration of solutions. Boxes of 10.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Librium® (chlordiazepoxide HCl)

5 mg, 10 mg, 25 mg capsules

Please see following page.

Disruptive anxiety usually meets its match here



Librium

(chlordiazepoxide HCl)

5 mg, 10 mg,
25 mg capsules



Please see preceding page for summary of product information.

February 1975
R.I. Medical Journal

Vol. 58 No. 2

Island
BALCONY



Newsletter
Enclosed

Both after



Predominant
psychoneurotic
anxiety

Associated
depressive
symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) may occur following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Use with caution in alcohol-addicted individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

FEBRUARY, 1975

Volume 51, No. 2

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.

*John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
*Stanley M. Aronson, M.D.	*Charles A. Hall, Jr., M.D.
*Bertram H. Buxton, Jr., M.D.	Robert V. Lewis, M.D.
Robert P. Davis, M.D.	*Peter L. Mathieu, M.D.
*John A. Dillon, M.D.	*Jay M. Orson, M.D.
*Herbert Fanger, M.D.	Henry T. Randall, M.D.
	*Guy A. Settipane

(*Also Member Publications Committee)

TABLE OF CONTENTS

SENATOR BENNETT: WHERE ARE YOU? Frank W. Sullivan, M.D.	53
THE ANATOMY OF THE JUDICIAL PROCESS Thomas F. Kelleher, Esq.	56
AN ANTIBIOTIC UPDATE: I. NEW PENICILLIN AND CEPHALOSPORINS Phillip J. Rubin, M.D. and Stephen H. Zinner, M.D.	62
EDITORIALS	65
BOOK REVIEW	45
MESSAGE FROM THE DEAN	39
PERIPATETICS	51
PRESIDENT'S MESSAGE	41
R. I. TEL-MED PROGRAM	43

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island, Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



HOUSE OF DELEGATES SUPPORTS R.I.P.S.R.O.

At its meeting January 29, the House of Delegates of the Rhode Island Medical Society supported a motion that the "Rhode Island Professional Standard Review Organization, Inc., (RIPSRO) is the only reasonable or acceptable group to direct and guide hospital utilization committees in the role of performing reasonable and practical concurrent peer review." The Society's House of Delegates took this action upon the recommendation of the Council.

A resolution presented by Dr. Jay M. Orson, Chairman of the Child-School Health Committee of the Rhode Island Medical Society, was also approved by the House. The resolved portion reads as follows:

Be it resolved, that the House of Delegates of the Rhode Island Medical Society concurs with the Congress of the United States and wholeheartedly supports the development of comprehensive health education programs in grades K-12 in the public and private schools of Rhode Island and that this resolution be disseminated to the people of Rhode Island through the news media.

In another action, the House voted that the use of a credit card by a patient on an individual basis is permissible subject to the restrictions and guidelines as listed by the AMA Judicial Council.

The House also accepted the Council's recommendation to retain the services of attorney Charles Butterfield, Jr. as the Society's representative during the 1975 session of the Rhode Island General Assembly. In these actions, the House considered three resolutions presented from the floor by individual

delegates. The first one introduced by Dr. Charles L. Hill, requested the Council, in cooperation with the liaison committee of the R.I. Bar Association, to explore the possibility of implementing a system of binding arbitration in cases of alleged malpractice. Sponsored by Dr. Melvin D. Hoffman, the second resolution asked the Council to con-

(Continued on page 4)

Blue Shield Nominees Elected

In accordance with the bylaws of Blue Shield of Rhode Island, the House of Delegates, at the Meeting of January 29, 1975, nominated four physicians to serve three year terms each as members of the board of directors. Named as nominees to the corporation were: Dr. John J. Cunningham of Pawtucket, an internist, Dr. Edmund T. Hackman of Warwick, a general practitioner, Dr. Melvin D. Hoffman of Providence, an internist and Dr. Kenneth Liffmann of Providence, a general surgeon.

In a separate action, the House of Delegates reaffirmed the nomination of Dr. Herbert F. Hager to serve the remainder of the unexpired term of Dr. Earl J. Mara until March, 1976.

Elected by the House as representatives to serve on the professional Advisory Committee, consisting of six physicians and three non-physicians, were Drs. J. Robert Bowen, Joseph DiMase and John P. Grady. Currently the non-physician members of this committee are Chesie Bosland, Ph.D., former professor of economics at Brown University, now retired, Daniel H. Ford, a labor organization official, and Judge Florence K. Murray of the Rhode Island Superior Court.



MALCOLM C. TODD, M.D.
Long Beach, California, President of American Medical Association who will address the Society at the Annual Meeting on April 16.

Annual Meeting of The Rhode Island Medical Society

APRIL 16, 1975

CHAPIN ORATOR:

H. Sherwood Lawrence, M.D.
New York University
School of Medicine

Please circle the date on your
alendar.

Dr. Farley Reports on Drug Regulations

Dr. John E. Farley, Jr., Chairman of the Drug Abuse Committee has reported that, Physicians in Rhode Island have always guarded the confidences of their patients, even though there is no patient/physician confidentiality statute in Rhode Island law.

It is important to be aware of some recent developments which gravely threaten our patients rights in this regard.

The Uniform Controls Substances Act of 1974 has a section which requires reporting by the physician to the State Department of Health, Division of Drug Control, the name and nature of the disease of the patient who receives Schedule II drugs after three months on continued use.

The genesis of this section is that it is a control method as filed by the Division under pre-existing statutes at a time when it only referred to narcotics in a true sense, i.e., Schedule A drugs. The reason the Division promoted this section is to "prevent accidental addiction." That is, multiple prescribing by many doctors for the same patient. The Federal Government, in the past four years, had gradually increased the scope of the now Schedule II category to include (besides narcotics) Glutethimide (Doriden), Methylquaalone (Qualud), and amphetamines, Methylphenidate (Ritalin), and several short-acting barbiturates, namely: Amytal, Nembutal, Seconal, and Tuinal.

This enlargement of Schedule II by the Federal Government had occurred at the time of the recent revision of the state law. Your Committee on Drug Abuse perceives that the result of this section would be the accumulation of the names of thousands of non-offending patients legitimately receiving these medications for valid and acceptable reasons in the Department of Health files.

We objected to this strenuously and continuously all through the revision of the state statutes, culminating in testimony before the Special Legislative Committee on Criminal Procedures, all to no avail.

A graver threat is the possibility that the Director of Health, under the power he was granted under the new law, will mandate the so-called "triplicate prescriptions" and other anachrist sounding controlled methods. This will result in the accumulation of the names of hundreds of thousands of non-offending patients as it applies to medications in *all* the schedules each and every time they are prescribed. Allegedly, this is a control mechanism but it is not in Federal law and only exists in four other states, none of whom can offer proof of its effectiveness — if it is to prevent forgery, it simply is a matter of another kind of prescription deal. If it is to detect physician misuse, since it can't be computerized, it will require a large department to administer it and these times of austerity budgets and freezing of state payrolls. The Drug Enforcement Agency, the federal drug authority, has never seen fit to recommend this control method to the states. We feel that the goals of the Division on Drug Control, could best be accomplished by on location inspection of prescriptions at pharmacies where federal law mandates the special segregation of these prescriptions, instead of needlessly stigmatizing thousands of non-offending patients by requiring the pharmacies to forward the names of these patients to a central agency apparently, merely to eliminate the necessity for on-location visits by their inspectors to the pharmacies.

Your Committee is currently pursuing all available legislative approaches; on the one hand, to eliminate the section on reporting after continued use; and, on the other hand, to oppose vigorously any attempt to implement a triplicate prescription control method by the Director of the Department of Health.

This section is not a Federal requirement and exists in few, if any, other state drug control laws.

It should not exist in Rhode Island statutes. It is an invasion of privacy — it should be amended.

Secretary Reports Council Activities

The Council has held three meetings since the previous meeting of the House of Delegates on September 18, 1974. Charles B. Round, M.D., Secretary of the Society, reported. Some of the actions taken were as follows:

AMA National Leadership Conference

The Council authorized the President to name representatives to the AMA National Leadership Conference (January 24-26, 1975 at the Marriott Hotel in Chicago). They were Stephen J. Hoyer, M.D., President-elect, Leland W. Jones, M.D., Assistant Executive Director, and Timothy B. Norbeck, Executive Director.

Delegates to State Meetings

The President was authorized to appoint delegates to represent the Society at the annual meetings 1975 of neighboring medical associations.

Council Service of Dr. Bertram H. Buxton, Jr.

The Council acknowledged the distinguished service of Dr. Bertram H. Buxton, Jr., as Councillor from the Providence Medical Association. The Council also welcomed Dr. Peter L. Mathieu, Jr., as Doctor Buxton's successor.

Annual Report of the Treasurer

The annual report of the Treasurer was received and placed on file subject to professional audit.

R.I. Interagency Council on Smoking

As authorized by the Council, the President again named Drs. Seebeck, Goldowsky, Leland W. Jones, and John C. Lathrop as the Society's voting delegates to the Interagency Council on Smoking.

Benevolence Fund Annual Report

The annual report from the Trustees of the Benevolence Fund was received and placed on file.

R. I. Chapter of the American Trauma Society

The Council voted to endorse the formation of the Rhode Island Chapter of the American Trauma Society.

U.R.I. Athletic Training Concentration

A planned University of Rhode Island (Continued on page 4)

PRESIDENT'S REPORT

Professional Liability Insurance: Update on a Growing Problem

Securing professional liability coverage, a problem for the past five years, has reached crisis proportions in several states. When Employers Mutual Liability Insurance Company of Wausau withdrew its blanket coverage of New York state physicians in July, 1974, Argonaut Insurance Company stepped in to the void. After insuring New York physicians for six months, Argonaut informed the state medical society that it was going to effect a 200 per cent rate increase (the average premium currently is about \$3,500) at once. The New York State Insurance Department rejected this increase and Argonaut declared it would end all coverage in New York when its contract expires on July 1, 1975.

The Medical Society of New York's members recently approved of a \$100 special assessment to be used to apprise the public of their plight and publicize the growing professional liability problem. Recommendations are that an orthopedic physician practicing in New York may have to pay \$45,000 in 1975 for professional liability insurance protection! That is how serious the problem has become in our neighboring state.

It is interesting to note that Argonaut approached the Rhode Island Medical Society in October, 1973, and offered an attractive package for Rhode Island medical society members if we switched our coverage from our current carriers. After consideration by the Society's officers and the Medical Economics Committee chaired by Dr. Kenneth Liffmann, a decision was made to reject the offer. In view of the recent New York action, it was a very good decision indeed!

Tennessee physicians were informed in late December that their professional liability insurance carrier was withdrawing from the market on February 1, 1975. The state medical society was able to obtain an extension of a few months to give them time to secure another carrier.

In Maryland, the professional liability insurance carrier for the state medical society announced its intention in

June, 1974, of leaving the state effective January 1, 1975 because its proposed rate increases were denied by the Maryland Insurance Commissioner. The carrier has agreed to extend that expiration date for another three months while that state medical society searches for a successor.

One carrier has withdrawn entirely from the Wisconsin market while the remaining carriers are not taking any new business and refuse to renew class IV and V physicians. Doctors in North Carolina, Florida, Michigan and Indiana are threatened with the loss of professional liability coverage or drastically increased premium rates.

The situation in Rhode Island, while not good, is far better than exists in a great majority of our states. Our three major carriers, St. Paul, Aetna, and Hartford are solid companies of proven reputation and experience. In this state the St. Paul is renewing all outstanding policies unless there is some critical underwriting problem such as losses and they will accept new business only on a very limited basis. No new business will be accepted, however, if the individual is currently insured in Rhode Island in a viable market. The Aetna C & S is not accepting any new business but they will renew outstanding policies subject to underwriting review and with a written agreement with the insured to the effect that the renewal premium is acceptable. The Hartford A & I is looking for no new business. All renewals are being underwritten with new applications and a full submission to the home office of the company. There are other insurance carriers for specific groups of doctors that are still functioning through their various group programs. Our advice is not to attempt to switch companies at this time.

Only six states have lower rates than prevail in Rhode Island and our rates are well below any state in the entire Northeast with the lone exception of New Hampshire. There will be substantial increases for Rhode Island physicians in 1975, just as there will be in

all of the other states. While these rate increases are distasteful to all parties involved, they cannot be avoided as the insurance companies continue to lose money and withdraw from the liability market. Insurance companies are also experiencing tremendous losses in their homeowners and fire and theft policies.

Your Rhode Island Medical Society Council and Medical Economics Committee have been wrestling with the serious problem of professional liability insurance for several years. There is no easy solution. In our efforts to alleviate the situation, we are currently exploring several available approaches which include consideration of a myriad of legislative proposals and the study of a system of binding arbitration. It is imperative that we avoid the type of crisis which has beset many other states.

What accounts for the present malpractice claims crisis? St. Paul's Fire and Marine Insurance Company explains as follows:

The Legal Rights Explosion

We're living in a much more litigious society. There has been a legal rights explosion. Citizens are quicker to sue when they feel their rights have been violated. Among those feeling the brunt of these suits is the medical profession. Consumerism has educated patients to understand that a lawsuit is simply another means of gaining redress of their grievances, real or imaginary.

More Plaintiff Attorneys

A greater number of plaintiff attorneys have become expert in medical malpractice litigation, charging an average fee of one-third of the claims payment. The patient generally pays medical witness fees and other legal costs from his share of the award.

Erosion of Legal Defenses

Changes by many state courts in legal concepts have made it easier for patients to obtain favorable judgments. In some cases negligence is assumed unless proven otherwise. The statute of limitations has been lengthened, greatly extending the time patients can bring lawsuits. There are other changes threaten to

(Continued on page 4)

PRESIDENT'S REPORT

(Continued from page 3)

make every doctor responsible for any result less than absolutely perfect in every way.

High Patient Expectations

Years ago sickness was accepted as part of life. Patients did not assume doctors could cure every ill. Despite tremendous medical advances, doctors still cannot guarantee success from every surgery, every treatment, every prescription, but television and other communications have led many people to have unrealistic expectations of modern medicine.

Impersonal Relationships

The doctor-patient relationship is less personal today as a result of increased urbanization, specialization, the widespread use of the medical insurance programs to finance health care and the mobility of Americans. Medical care is more efficient, more effective, but often there is less communication. Only television doctors can spend unlimited time with patients, make house calls and seldom give less than perfect care.

Medical Improvements

The practice of medicine is complex and getting more complex. New techniques and drugs save lives that would have been lost before, but bring new risks.

The Cost and Delays of Litigation

Medical malpractice claims are unusually expensive to handle. Highly qualified personnel are required because a good deal of experience and expertise is necessary to investigate incidents and determine whether negligence was present. When a case is considered non-meritorious, or agreement cannot be reached on the amount of loss, and it goes to trial, costs of legal counsel mount rapidly.

I believe it is fair and accurate to say that the public generally looks upon the professional liability predicament as a problem of concern merely to physicians, hospitals and insurance companies. Malcolm C. Todd, M.D., President of the American Medical Association, has said that "the problem of professional liability is a public problem and its resolution can be achieved only

through an expression of public policy." Dr. Todd, who will address the Society at our annual meeting on April 16, expressed the AMA's contention recently that "the problem has assumed its present disastrous proportions largely because the public does not recognize the problem as one in which its own interests are at stake."

When premium rates double and triple, physicians and hospitals protest. We pay them because we must deliver care to our patients and we have no other choice. Somewhere along the line these additional costs cannot be absorbed and must be passed on to our patients in the form of higher fees. When insurance companies withdraw their coverage from a state, it is the public — the individual patient — who is threatened with the loss of medical care. For what physician would dare to see a patient without liability protection? The public does not yet grasp these points nor does it understand that elderly physicians will retire before paying exorbitant premiums. What young physicians just coming into practice can afford to spend several thousand dollars a year for liability coverage? Physicians will leave some states and refuse to come into others as the cost of the premiums continue to skyrocket.

Physician manpower could be greatly affected in certain areas. The distribution of physicians, already a problem in some states, could develop rapidly into crisis proportions. These are the implications which directly affect the public. We must help the public recognize that it, too, has a stake in the liability problem which confronts physicians.

I doubt very much if the public is aware that according to the AMA, only 16 cents of every dollar spent for professional liability insurance ends up as direct payments to patients who suffer medical injury. The balance of 84 cents goes for plaintiff and defense lawyers, costs of investigation, for medical witness fees and insurance underwriting costs. Clearly something must be devised to protect the public without undue waste. We must have a system which recognizes legitimate medical injury and compensates those who are

injured without needless delay. That should be attained at a rate commensurate with the seriousness of the injury, but it should be a system which is not based solely on proving negligence. The public must understand that there are injuries which can result from medical treatment that are the result of malpractice. We have a big job ahead of us, and I assure you that your Rhode Island Medical Society is doing everything possible to allay a serious problem and avert a crisis.

NATHAN CHASET, M.D.
President

HOUSE REPORT

(Continued from page 1)

consider, study and recommend to the House a mechanism by which ten of RIMS representatives to other groups or organizations and membership Society committees be limited as to length of time. The third resolution presented by the Kent County Medical Society, called upon the Rhode Island Medical Society to employ a public relations firm to assist in the presentation of the physician's side of current medical problems to the community and that an appropriate assessment be levied to cover such expenses. All three resolutions were referred to the Council for consideration.

SECRETARY'S REPORT

(Continued from page 2)

land athletic training concentrated within the degree program in physical education was endorsed by the Council.

Tel-Med Program

The Council voted to endorse the Tel-Med Program and the licensing agreement which lists the Council of Community Services as the licensee. The President was authorized by the Council to appoint a Committee to select a list of Tel-Med tapes and review them for content.

AMA Survey

The President was authorized to appoint any small Committees as he might deem necessary to study the recommendation selection of the AMA Survey and report back to the Council.



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

MEDICAL EVENTS CALENDAR

Wednesday, March 19 and 26, 1975

BASIC SCIENCE COURSE IN NEUROPHYSIOLOGY

William J. McEntee, M.D.
Chief of Neurology
Veterans Administration Hospital
Assistant Professor of Medicine

Veterans Admin. Hospital
Room 1 — Auditorium
2:00 p.m.

Thursday, March 20 and 27, 1975

CARDIOLOGY TEACHING CONFERENCE

Jack H. Klie, M.D.
Clinical Instructor in Medicine

Veterans Admin. Hospital
Room 1 — Auditorium
1:00 p.m.

Thursday, March 20, 1975

**CONTROL OF CYCLIC AMP ACCUMULATION IN CULTURED
HUMAN CELLS BY ADENOSINE**

Dr. Richard Clark
Department of Biochemistry
University of Massachusetts Medical Center

Brown University
J. Walter Wilson Laboratory
Room 228
11:30 a.m.

Saturday, March 22, 1975

MANAGEMENT OF ABDOMINAL TRAUMA

Francis C. Nance, M.D.
Professor of Surgery and Physiology
Louisiana State University Medical Center
New Orleans, Louisiana

Rhode Island Hospital
George Build. Auditorium
10:00 a.m.

Brown University Medical Student Society Lecture Series presents:
THE EXISTENTIAL QUALITIES OF MEDICINE

(with) Dr. Melvin J. Krant
(author of) *Dying and Dignity: The Meaning of
a Personal Death*

Brown University
List Art Build. — Auditorium
10:00 a.m.-12:00 noon

Thursday, March 27, 1975

EXOPHTHALMOS IN HYPERTHYROIDISM

Milton W. Hamolsky, M.D.
Physician-in-Chief
Rhode Island Hospital
Professor of Medicine

Rhode Island Hospital
7th Floor Conference Room
Ambulatory Patient Center
7:30 p.m.

LOW RENIN HYPERTENSION

James C. Melby, M.D.
Professor of Medicine, Head, Section of Endo-
crinology and Metabolism
University Hospital
Boston, Massachusetts

The Miriam Hospital
Grand Rounds—Sopkin Aud.
11:00 a.m.

Saturday, March 29, 1975

**THE RELATIONSHIP OF HOSPITALS AND THEIR PERSONNEL
TO THE MEDICAL EXAMINER'S OFFICE**

William Q. Sturmer, M.D.
Chief Medical Examiner, State of Rhode Island
Department of Health
Providence, Rhode Island

Rhode Island Hospital
George Build. Auditorium
10:00 a.m.

Thursday, April 3, 1975

**UTILIZATION OF PATIENT COPING RESOURCES AS A DE-
LIBERATE THERAPEUTIC DEVICE**

Walter Gruen, Ph.D.
Research Psychologist
Rhode Island Hospital
Clinical Assistant Professor of Psychiatry

Butler Hospital
Ruggles Room
4:30 p.m.

Saturday, April 5, 1975

REGIONAL ENTERITIS AND ULCERATIVE COLITIS PROBLEMS

Frank C. Wheelock, Jr., M.D.
Assistant Clinical Professor of Surgery
Harvard Medical School
Boston, Massachusetts

Rhode Island Hospital
George Build. Auditorium
10:00 a.m.





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

MEDICAL ETHICS: HOW MUCH CAN BE TAUGHT?

Medicine has for centuries raised technical questions and turned to resources best defined as humanistic, rather than scientific or technical. However, the education of the physician does not include a formal consideration of the humanities as they relate to medicine. It is generally assumed that a good physician is by definition a humanist and that the medical student, through repeated exposure to patients and the example of his teachers at the bedside, will naturally acquire the qualities and sensitivity, judgement and compassion which society expects from its physicians.

In recent years, however, there has been a growing and painful recognition that the human dimension within medicine may be lost, rather than gained, in the process of medical education. Perhaps it is that young people raised in the cult of growth, optimism and success cannot cope with the harsh realities of pain and death. Perhaps the insertion of medical technology between the patient and his physician obscures the human bond which derives from caring and healing. Perhaps our new scientific capabilities for controlling many facets of life are so frightening that our society has not yet developed a value system to cope with the progress of medicine. In the absence of an accepted framework of reference, teachers instinctively recoil from considerations which are not directly "professional." As a reaction the recent years have witnessed the emergence of scattered explorations attempting to relate medicine to human perspectives. Medical Ethics, the study of moral values as they relate to the practice of medicine, represents one of these new trends.

Let us first observe that Medical Ethics does not begin or end with the kind of dramatic considerations which magazines expound when they report on sensational technological innovations such

as the transplantation of hearts, livers, or genes. These medical activities are uncommon and esoteric, and exclusive consideration of the moral issues they raise is likely to provide a distorted view of the subject. Similarly many of the biological and behavioral problems associated with the evolution of societal values have some ethical aspects of their own, e.g., the issues of alcoholism, drug addiction, or human sexuality, but these ethical aspects are not the dominant ones in medical education. Medical ethics embrace also considerations of the value systems that can be applied to the transaction between a patient and his physician. It involves two factors: a medical situation, and the ethical aspects of that situation. Because value systems in our society are increasingly divergent, and the physician has no choice or control of the value system of his patients, medical ethics is sometimes viewed as an exercise in futility. Those who feel that way tend to review "real life" situations from a legalistic rather than ethical, perspective.

Can medical education do something to inform and sensitize future physicians in this area? How can it be done? At what level in their training?

For the past eighteen months, a group of faculty from Brown's Departments of Philosophy, Religious Studies, Biology, and Medicine has attempted to push beyond the level of academic discussions. This group has organized appropriate pairs of medical and non-medical faculty to lead formal University courses on "Individual Rights and Social Obligations in Contemporary Medicine," and "Ethical Problems in the Field of Mental Health," and has covered topics such as:

a) concepts of life and death as reflected in various streams of Western civilization (Judeo-

(Continued on next page)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

559-9

Christian tradition; materialistic, existential, or "theatre of the absurd" view of life);

b) dying, death and grief from the viewpoint of the patient and his family;

c) the expression and the treatment of pain; euthanasia by omission or commission;

d) the limits to organ transplantation, the conflict of demand and resources, patient's rights versus society's rights in accepting or rejecting therapy;

e) informed consent, the ethics of double blind, single blind, and controlled clinical trials;

f) genetic manipulation and genetic counseling; ethical implications of amniocentesis and of screening for heterozygous carriers;

g) anxiety and the plight of the sick in the face of technocratic medicine; the problem of non-compliance with medical advice; physician's and patient's perspective in chronic debilitating disease; and

h) medicine and social policy, the right to health; power structure and decision making regarding health care services.

University courses in Biomedical Ethics address themselves to students in their upper classes of college. In the Medical School the same considerations have been presented by the "clinical case method," although some faculty doubt whether in this format the fundamental ethical issues receive adequate consideration. Last winter, a conference on "Ethical Issues in Medical Decisions Regarding Life and Death" featured nationally known thinkers from the field of Philosophy and Medicine and attracted a wide audience. This effort will continue, and we hope to elicit participation from the medical community in Rhode Island as well as others in relevant disciplines and professions.

PIERRE M. GALLETTI, M.D., Ph.D.
Vice President
(Biology and Medicine)



Mr. John E. Farrell, Sc. D., former Executive Secretary of the Rhode Island Medical Society, and Managing Editor of the RHODE ISLAND MEDICAL JOURNAL was recently elected clerk of the Bonnet Shores Fire District in the town of Narragansett.

President's Page

The problems plaguing American Medicine to day seem most oppressive, and I thought I should bring to your attention some of the major issues and perhaps tell you what's being done nationally and locally.

I judge that the situation with malpractice insurance is about our greatest problem. The AMA, HEW, Blue Cross-Blue Shield, and many others are well aware of the effect this has on the practice of medicine. The solutions are not yet in sight, but at least many people are working on them. Our real concern now is that we retain our coverage. It is obvious to all of you that premiums have risen beyond all our expectations. New forms of insurance will be offered, and some forms will be denied us. One company has already revoked the "umbrella" policy and leaves many of us vulnerable and at a tremendous disadvantage, but I do hope you will do your best to retain what you have despite the increased premiums. Your society is well aware of your problems and is working to alleviate the situation. (See the Newsletter for further information on this subject.)

RIPSRO is doing a grand job. We have a very hard-working and knowledgeable group. They deserve our heartiest commendation. Some organizations have tried to seek alternative forms of review and have even gone out of state to try to get alternative methods. There was a great outcry from all our component societies. It was unanimously agreed that concurrent review and all kinds of review must be done only by physicians, and, without dissent, it should be done by the groups of physicians working with RIPSRO. I will not elaborate further, but I do believe we have made our point, and the message should ring out loud and clear to those trying to circumvent RIPSRO.

As most of you know, the Society has had a complete review done by a survey team from the AMA. This was a most thorough and comprehensive survey performed by real professionals in the

field. We have that report, and it is in four sections. I have assigned each part to a separate Commissioner and have allowed each to pick his own committee members to help him. No decisions have been made. There will be an exhaustive survey done by our own people, and each section will bring in a written report to the next meeting of the Council. After proper discussion, the entire matter will be submitted to the House of Delegates for approval. This is being done in the most democratic way I know, and the results should benefit all of us. It is unfortunate that some people felt they had to express their views in print long before any decisions had been made. It was planned that everyone would be given adequate opportunity to express his or her views at the proper time. I do hope that in the future there will be no repetition of this action. It is unfair to our hard-working committee members to be assailed by this unfair action.

It is of the utmost importance that the R. I. Medical Society remain a viable and potent force in our community, in our dealings with our local government, with our hospitals, with our third party payers, and also with our detractors. We cannot continue brinkmanship and only respond when we are confronted with a crisis. This requires manpower and also the financial resources to implement our leadership and our strength. We will have to trim our deadwood and make our Society efficient, self-sustaining, and a leader in our community in all matters of health. We need all the help we can get from our membership. We need your constructive criticism; we need open-mindedness on the part of all; we need your moral support and financial assistance; and above all we need your brotherhood or your sisterhood in the hard times ahead.

NATHAN CHASET, M.D.

President,

Rhode Island Medical Society



Plan Now To Attend

THE ANNUAL MEETING
of the
Rhode Island Medical Society

WEDNESDAY, APRIL 16, 1975

CHATEAU DeVILLE
Warwick, Rhode Island

SOCIAL HOUR — 6:00 P.M.

DINNER — 7:00 P.M.

The Chapin Orator Will Be:

H. SHERWOOD LAWRENCE, M.D.

New York University School of Medicine

R. I. Tel-Med Program To Begin In April

The Rhode Island Medical Society, in cooperation with the Department of Health, Blue Shield and the Council for Community Services, will provide the residents of Rhode Island with a service of free recorded messages on various health topics. Known as Tel-Med, it is based on a program originally developed by the San Bernardino (Ca.) County Medical Society. Since its inception two and one half years ago, Tel-Med has expanded into numerous areas, having been adopted by medical societies in Massachusetts, Minnesota, Oregon, Tennessee and Texas.

Tel-Med gives the public telephone access to a library of three to five minute tape recordings on health subjects carefully selected by physicians. The scripts for the tapes are written by physicians and recorded by professional radio and television personnel. Richard L. Testa, M.D., is chairman of the Tel-Med Committee of the Rhode Island Medical Society. His committee has selected the first 150 tapes to be used in the Rhode Island program.

The Tel-Med telephone library is designed to:

- help one remain healthy
- help one recognize early signs of illness
- help one adjust to a serious illness

Tel-Med is not to be used:

- in an emergency
- to find out what one's illness is
- to replace one's family doctor

Brochures outlining the "do's and don'ts" of the program and listing the tape subjects available will be distributed to all physicians' offices for free dissemination to their patients. One who wants to use the program simply dials the telephone number on the brochure and gives the operator the number of the tape he or she wishes to hear. The Tel-Med Program for Rhode Island is expected to commence operations in early April. Any physician desiring further information about Tel-Med may call the Executive Office of your Rhode Island Medical Society (331-3207).



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association



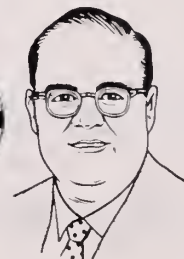
R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.



WHEN FLU HITS AND HURTS

HERE

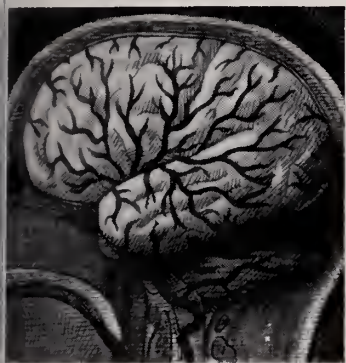
Muscles
and joints



Wherever it hurts, Empirin Compound with Codeine usually provides the symptomatic relief needed.

HERE

Headache



In flu and associated respiratory infection, Empirin Compound with Codeine provides an intuitive bonus in addition to relief of pain and bodily discomfort.

prescribing convenience:
up to 5 refills in 6 months,
at your discretion (unless
restricted by state law); by
telephone order in many states.

Empirin Compound with
Codeine **No. 3**, codeine
phosphate* 32.4 mg. (gr. ½);
No. 4, codeine phosphate*
64.8 mg. (gr. 1) *Warning—may
be habit-forming. Each tablet
also contains: aspirin gr. 3½,
phenacetin gr. 2½, caffeine
gr. ½.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

HERE

Respiratory tract



EMPIRIN[®] COMPOUND c CODEINE

#3, codeine phosphate* (32.4 mg.) gr. ½

#4, codeine phosphate* (64.8 mg.) gr. 1

The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail man I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

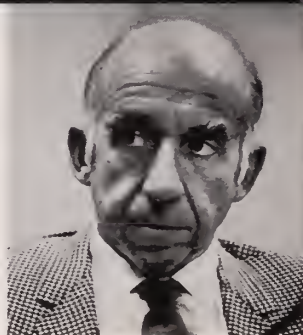
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Willard Gobbell
Family Physician
Encino, California

Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent film produced by the pharmaceutical industry. When they function in the

Opinion
&
Dialogue

He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply printouts of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. I go without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—i.e., the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

*Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005*





Keeping things in balance...*

Antivert®/25 Tablets (25 mg. meclizine HCl)

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective. Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective. Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation

has produced cleft palate in the offspring. Limited studies using doses of over 1 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children. Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 
A division of Pfizer Pharmaceutical
New York, New York 10017

Book Review

GENERAL OPHTHALMOLOGY by Daniel Vaughan and Taylor Asbury. Seventh Edition. Los Altos, California, Lange Medical Publications, 1974. \$9.50

Medical students face a number of problems when purchasing texts today. Not the least is cost, and when taking their various specialty training courses they are often in a quandary as to whether or not to purchase a text that they anticipate will find little use once the course is over. Here is a text in basic ophthalmology that will reduce these problems to a minimum and provide a manual for the student that is low in cost and revised frequently enough that it is really up-to-date.

The entire field of ophthalmology is covered in simplified form, and any student who masters its

contents will experience no fear when he encounters his first "eye patient" on the wards or the emergency. Here is a fine rundown on the problems of the red eye, glaucoma, ocular trauma, ophthalmoscopy, and the many other aspects of eye care that the student or house officer may encounter. In addition, material is presented to cover the usual problems in disability and industrial visual problems, a subject often lacking in other books. This is not a text to be purchased by those going into ophthalmology as a specialty. (The many hard cover texts might be better.) But for the student who wants a simple outline of a subject that will occupy at least 5 per cent of his time if he is a family practitioner, internist, or pediatrician, and at a reasonable cost, then this text is the answer.

ROBERT S. L. KINDER, M.D.

Will You Support The Rhode Island Professional Standards Review Organization, Inc.?

OVER 900 PHYSICIANS HAVE JOINED!!

The officers and the Board of Directors of R.I.P.S.R.O., Inc. have applied to the Secretary of Health, Education and Welfare for designation as the PSRO for the Rhode Island area and have received a planning grant to qualify as a conditionally designated PSRO. Under the law, a "substantial portion" of all physicians in the area must be members of R.I.P.S.R.O.

It is our hope that you will agree with the approach of the officers and directors of R.I.P.S.R.O., a peer review organization controlled and directed by a committee of licensed physicians. Even though you may not agree with the basic concept of PSRO itself, we hope that you will give your support by requesting membership in R.I.P.S.R.O. There are no dues, fees or other monetary obligations involved.

Dr. Alton M. Paull
President — R.I.P.S.R.O., Inc.

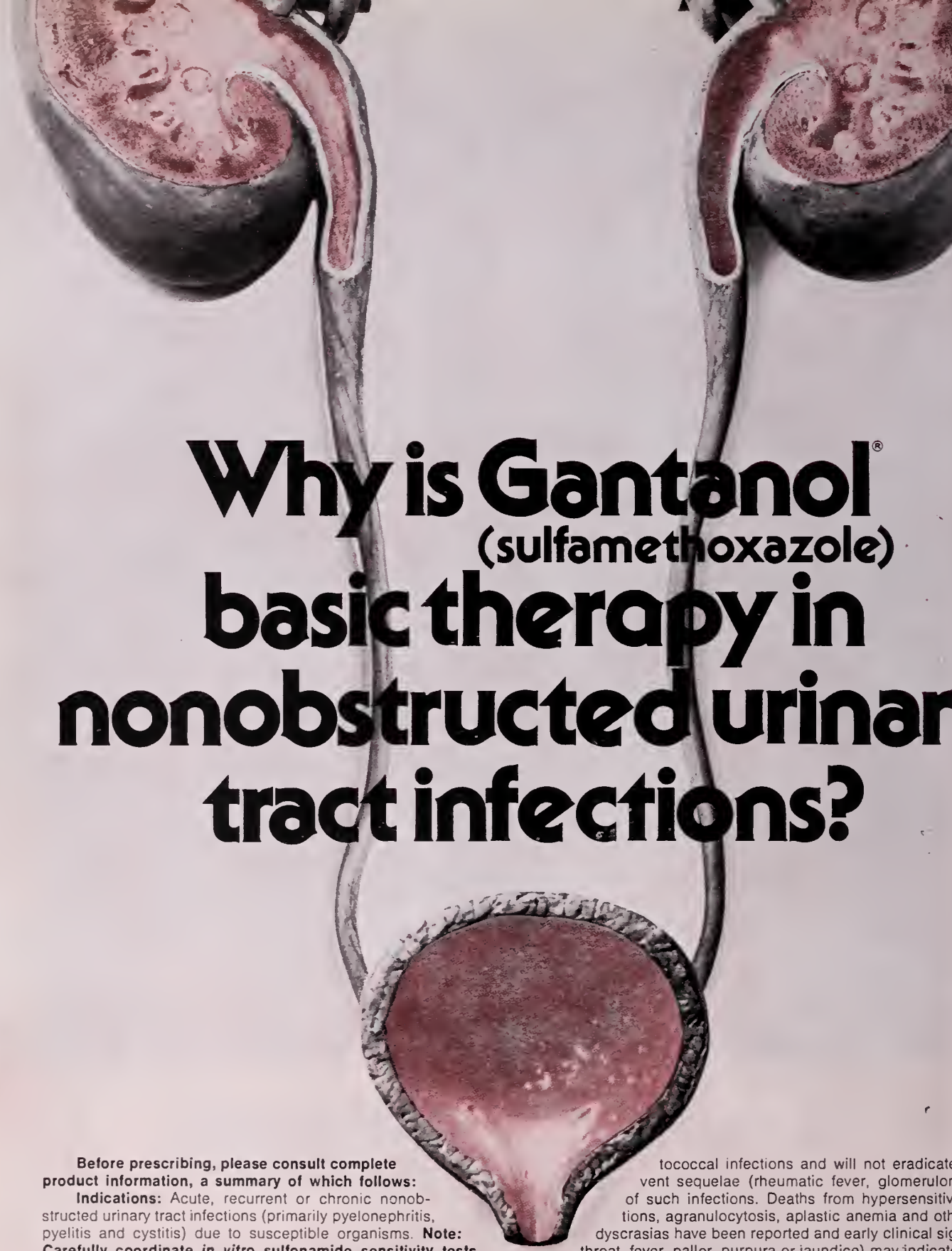
Dr. Alton M. Paull, President
R.I.P.S.R.O., Inc.
106 Francis Street
Providence, Rhode Island 02903

Dear Doctor Paull:

I agree with the general approach of the officers and Board of Directors of R.I.P.S.R.O., Inc., a physician controlled and directed organization, and wish to support that organization as long as it shall be controlled by the physicians of Rhode Island.

I hereby accept membership in R.I.P.S.R.O., Inc.

.....
Signature	Address
.....
Name Printed	Date



Why is Gantanol[®] (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic strep-

tococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom diet-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, ur-

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli*, *Klebsiella-Aerobacter*, *Staph. aureus*, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy **Gantanol[®]** (sulfamethoxazole) Tablets/Suspension (0.5 Gm) (0.5 Gm/teasp.)

ura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, vertigo, tinnitus, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

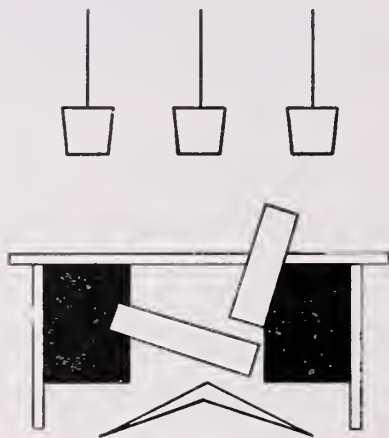


Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) GASpee 1-5228

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue
Cranston, R. I. 02920
(401) 943-1884

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

454 R

When diarrhea has his number...



Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea

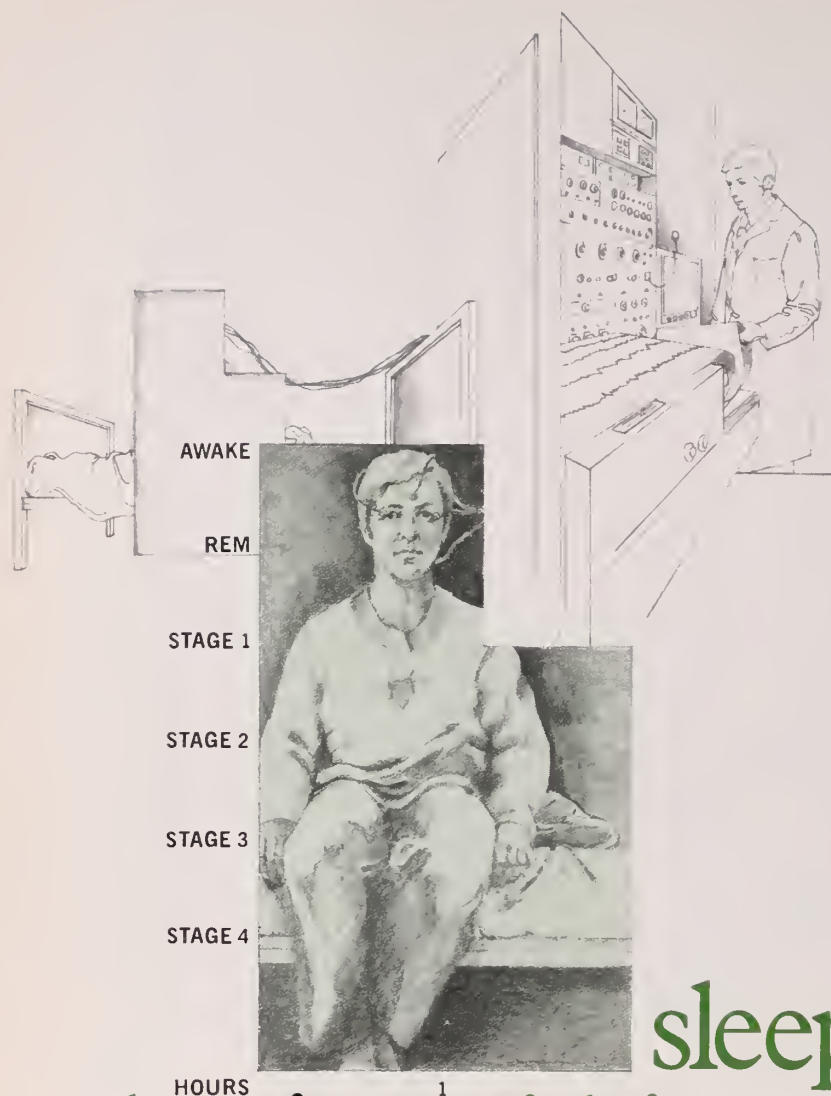
and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil[®]
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)
atropine sulfate 0.025 mg.

Usually stops diarrhea promptly.

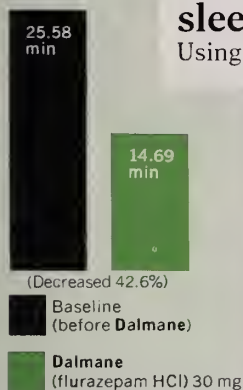


sleep
begins within
17 minutes, on average ...
an initial benefit of

Dalmane[®]
(flurazepam HCl) proved by a
22-night clinical study of insomnia patients
in the sleep research laboratory and at home¹

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.¹

Average Time Required
to Fall Asleep (4 Studies,
16 Subjects²⁻⁵)



confirmed by clinical studies in four geographically separated sleep research laboratories²⁻⁵

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage²⁻⁵

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, (e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

REFERENCES: 1. Kales A, et al: *Arch Gen Psychiatry* 23:226-232, Sep 1970

2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971

3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

when restful sleep
is indicated

Dalmane[®] (flurazepam HCl)

One 30-mg capsule h.s. — usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule h.s. — initial dosage for
elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities.

Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH **DYAZIDE**[®]

Trademark

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K⁺ rich diets needed as a rule



Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

Hopkins

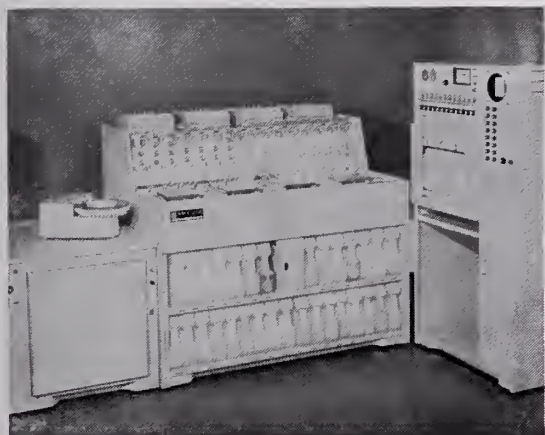
Profile "20"

Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

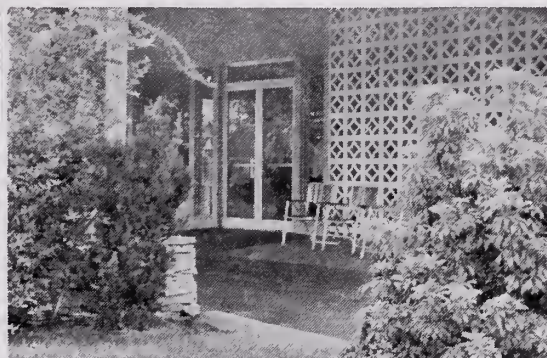
ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

HEALTH HAVENS

A SKILLED NURSING HOME
Medicare Participating



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed
100 Wampanoag Trail East Providence
Tel. 438-4275
JCAH Accredited

POOLS BY AQUA FUN

BUILDERS IN THE ART OF
CUSTOM POOLS

Specializing In

ONE PIECE FIBERGLASS POOLS —
NO SEAMS

WITH SELF CLEANING POOL SYSTEMS

FREE FORMS —

DESIGN YOUR OWN POOL

VISIT OUR INDOOR DISPLAY POOL

384 Atwood Ave., Rt. 5
Cranston, R.I.

Postage due is a postage don't.



And if the two of you aren't happy, we're not either.

Postage due is a thing of the past. From now on, if you send us claims without enough postage, they may never get to us. Instead, they may either be returned to you or sent to the dead letter office.

This new post office regulation could cause a significant number of lost claims and delays. The people most affected will be you and your patient.

So please make sure your claims mail is going out with the correct postage. A postage meter scale can help. A legible return address on every envelope can help, too.

We process your claims as fast as we possibly can. It's unfortunate when we're all held up by some missing ten cent stamps.





Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with onset after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."¹

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:

100 mg. phenylbutazone USP

100 mg. dried aluminum hydroxide gel USP

150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



**Fire fighter
for arthritic
flare-ups.**

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis. In Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia: Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension; thyroid disease; systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpre-

dictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonyleurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dys-

pepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardley, New York 10502

BU 10259

Peripatetics

IRVING A. BECK has been elected a trustee of the Boston Medical Library. Earlier, he addressed the Rhode Island Society of Medical Assistants on the subject of "A Retrospective View of Medical Advances in the Last Three Decades."

* *

LOUIS A. LEONE, Rhode Island Delegate to the National American Cancer Society Board of Directors, has been elected to the Executive Committee of the Board and to the Medical and Scientific Executive Committee both for a one year term. This announcement was made in New York by Lane W Adams, Executive Vice President of the National Society.

He was also appointed Vice Chairman of the Professional Education Committee and Vice Chairman of the National Task Force on Colon and Rectal Cancer.

Doctor Leone, Past-President of the Rhode Island Division, and Director of Cancer Research at Rhode Island Hospital, will also serve on the

(Concluded on Page 68)

Introducing

NUVEEN TAX-EXEMPT BOND FUND

Check-a-Month Plan Series 60

The coupon below will bring information on how to obtain income which is entirely exempt from Federal income taxes, in the opinion of counsel. This new series consists of 200,000 units—each of which offers you a share in a \$20,000,000 par value portfolio of professionally selected municipal bonds. The Fund's chief objectives are conservation of capital and tax-free return. Participants receive a monthly check for their proportionate share of the tax-free interest. For a free prospectus, call or write your nearest Nuveen office or:

WAYNE E. CROSS

1349 West Shore Road, Warwick, R. I.—738-4574

representing

INVESTORS DIVERSIFIED SERVICES

Please send me information of the Nuveen
Check-a-Month Plan.

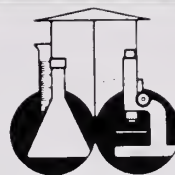
Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____

**NUVEEN
TAX-EXEMPT
BOND FUND**



Copies of the Prospectus may be obtained in any State only from a dealer which may offer these Units in such State.

Half a Century of Service to the Medical Profession



eastern scientific company

267 PLAIN STREET
PROVIDENCE, RHODE ISLAND 02905

ONE CALL! Your complete source of all medical, surgical, laboratory needs

YOU'RE INVITED TO VISIT OUR
NEWLY EXPANDED MEDICAL &
SURGICAL SUPPLY DEPARTMENT

WOULD YOU LIKE OUR NEW
MEDICAL SUPPLY CATALOG?

Call 421-4600

Kefzol®

cefazolin sodium

Ampoules, equivalent to 1 Gm. of cefazolin



Lilly

Additional information available
to the profession on request.

Eli Lilly and Company
Indianapolis, Indiana 46206

400380

Senator Bennett: Where Are You?

Any Success Of P.S.R.O. Will Be Credited To Him, Any Failure To Organized Medicine.

By Frank W. Sullivan, M.D.

In the formative stages of developing what was to become Section 249F of PL 92-603¹ or what we have dutifully learned to call the PSRO Law, its sponsor, Senator Wallace F. Bennett, pointed out to the Senate² that "(this proposal) would provide physicians with an imaginative and exciting opportunity to assume basic responsibility for reviewing health care as a whole. It would scrap the piecemeal review activities of varying effectiveness that have prevailed since 1966. . . ."

On October 30, 1972, after passage by both houses of Congress, the comprehensive Social Security Amendment of 1972, including the PSRO Section, were signed into law by the President. The American Medical Association, responding to the realities of this mandated system of peer review, recommended an approach to implementation along with organized efforts at amendments to the law and favorable regulations.³ The constituency on reviewing the law did not feel so readily inclined, voiced dissatisfaction, and attempted to initiate an organized repeal effort.⁴

FRANK W. SULLIVAN, M.D., *a practicing psychiatrist in Cranston; member, Board of Directors of R.I. P.S.R.O., Inc.; Treasurer, Rhode Island Medical Society; Chairman, American Psychiatric Association Task Force on Peer Review; Clinical Assistant Professor, Brown University, Division of Biological and Medical Sciences.*

Further deliberations at the AMA Annual Convention in Chicago in June, 1974 with reassurances and promises similar to those of Sen. Bennett resulted in a more unified decision of the AMA and its constituency to move ahead with implementation. Although some geographic areas continued to balk, a majority of physicians set out to establish local PSROs in the belief that they would be of physician design and thereby reflect our ideas and practices concerning peer review.

Despite initial commitment and after expending no small amount of energy and time, physicians have begun to have reason to be doubtful as to their actual role under this and any federally mandated form of review. Although many aspects of the problem could be examined, one major and current issue will be discussed.

CRITERIA DEVELOPMENT

Both the law and its regulations⁵ state the importance of physician development and operation of the local PSRO and further that criteria development is within the purview of the local component. Criteria are elements of care against which medical practice can be measured. Criteria sets by disease or problem areas are required by the PSRO law and are intended to objectify review as well as allow a majority of routine reviews to be performed by non-physicians, thereby lessening physician review time.

(Continued on next page)

The AMA, in what certainly began as an attempt to aid local review components in criteria development, in July, 1973 initiated with thirty national specialty societies a collaborative project to develop sample or "model" criteria sets for diagnoses representing 75 per cent of hospital admissions within the purview of each specialty. A common format was agreed upon (see Figure I) which was similar to that in use by Utah Professional Review Organization and Medical Advances Institute, two review bodies already involved in review programs using a criteria methodology. Without success at securing federal funding, the AMA and the participating specialties, relying solely on internal funding, collaborated on the agreed project and created initial "model criteria sets" by the completion deadline set in February, 1974. The project was undertaken with the under-

Figure I.

-
- Diagnosis (Problem):
- I. Indications for Admission:
 - II. Length of Stay:
 - III. Services Consistent with Diagnosis:
 - A. History:
 - B. Past History
 - C. Physical Examination:
 - D. Laboratory Tests (usual and optional):
 - E. Special Diagnostic Procedures (usual and optional):
 - F. Consultations:
 - G. Special Therapy Services:
 - H. Specific Nursing Services:
 - I. Medications:
 - J. Operations:
 - K. Hospital Course:
 - IV. Indications for Discharge:
 - V. Ambulatory Care:
-

standing that the AMA would print and distribute to local review components a compendium of the criteria sets and that a project for the review and revision of these sets would continue over the following 18 months.

Again, because of the lack of funding sponsorship by HEW, the printing and distribution of this first organized attempt at criteria development was delayed. In the July 8, 1974 issue of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,⁶ however, Dr. Claude L. Welch, Chairman of the AMA Task Force on Guidelines of Care, commended the specialty societies on their products, showed examples of several criteria sets, and assured the constituency of the compendium distribution by November, 1974.

Perhaps physicians were better off without federal funding, for in the summer of 1974 (one year after organized criteria development had begun)

the Department of HEW and the AMA came to terms on a \$996,000 grant towards an 18-month project to develop criteria. Medicine was thereby to be reminded of a lesson it has been extremely slow in learning, that "he who holds the purse, shapes the product."

Three components were established under the new project: A Technical Advisory Committee, a Project Steering Committee, and a Project Policy Committee. The first was a small committee of essentially designated HEW physicians, the second was Doctor Welch's Task Force "re-named." The third and central component was to be composed of a representative from each national specialty society; and its purpose was to "establish a standard format and minimum content for the criteria sets, develop a document outlining appropriate methodology for use of the criteria sets at the local level, and otherwise assist in encouraging involvement of national medical specialty societies in this project."⁷

LIMITED ROLE

At the first meeting of the Project Policy Committee on September 5, 1974, the participating specialty societies learned that the format and content of the criteria had already been decided upon by the two "supervisory" committees and that the Policy Committee's role would be one of "reviewing and approving" the format to be used by them rather than participation in design. Although many of the members of the Committee raised objections to this heavy-handed approach, they realized that the Policy Committee was essentially "pro forma."

Medicine's initial response to the PSRO legislation and its unified attempt at developing criteria for admission certification and concurrent review was viewed as "interesting and education" but not what HEW had in mind. Instead, HEW's Technical Advisory Committee pushed its own criteria set format on the Policy Committee (see Figure II) and convinced the AMA that the original model criteria sets should *not* be circulated to local review components lest they become "confused" (i.e. implement review methodologies of physician rather than HEW design).

Without discussing the relative merits of the two format approaches, the original model criteria sets were designed to satisfy a variety of review responsibilities, utilization, quality, and cost (services) to be addressed in concurrent review. HEW's version relates specifically to its interpretation of

Figure II.

- Diagnosis (Problem):
- I. Justification for Admission (5 or fewer entries):
 - II. Length of Stay
 - A. Initial Length of Stay Assignment:
 - B. Extended Length of Stay Assignment:
 1. Reasons for Extending Initial Length of Stay:
 - III. Validation of (5 or fewer entries):
 - A. Diagnosis:
 - B. Reasons for Admission:
 - IV. Critical Diagnostic and Therapeutic Services (5 or fewer entries):
 - V. Discharge Status (5 or fewer entries):
 - VI. Complications
 - A. Primary Disease and Treatment—Specific:
 - B. Non-Specific Indicators:

the PSRO regulations, markedly condenses utilization review (concurrent review), and attempts to combine medical audit (medical care evaluation, quality review, retrospective review) with concurrent review.

Physicians are willing to develop and experiment with alternative review methods, realizing that meaningful review will require recurrent evaluation and modification. When, however, HEW demonstrates its strong influence in the initial application of PSRO by stating what the content of criteria shall be, physicians become less than convinced of their supposed primary role in program implementation.

If the combined product of thirty national specialty societies can be so summarily cast aside and replaced by a federal agency's interpretation of the "law's intent for criteria," realistically what chance will a local hospital or even a single PSRO have at convincing the Secretary of the Department of Health, Education, and Welfare of its program effectiveness if it is at variance with evolving "national criteria or guidelines. As one of the initial examples of physicians' actual voice in program input, the fact that the initial review criteria of organized medicine were rejected by HEW and "are not to be circulated" should demonstrate to the local physicians how much variation from the central theme will be tolerated when "City Hospital" of "Central City, U.S.A.," submits what may be an innovative review methodology, regardless of its effectiveness.

To reexamine Senator Bennett's promise for this piece of legislation, it is not for physicians proving to be very "imaginative or exciting," and we are beginning to doubt that we have any real role of "basic responsibility for reviewing health care." With the recent PSRO budget cuts to \$37,000,000, HEW's expressed intent to revise criteria to mini-

mum content and the parceling of utilization review to three subdivisions of HEW (the Bureau of Quality Assurance, the Social Security Administration, and the Social and Rehabilitative Services)⁸, we doubt that there will be any significant scraping of "the piecemeal review activities of varying effectiveness that have prevailed since 1966. . . ."

OUTLOOK

Regardless of what the good Senator believed or wanted us to believe about his "exciting" piece of legislation, it has begun to dull prematurely. While Wallace Bennett settles into retirement in his native state of Utah, medicine is left with the implementation of his cumbersome "brain child." Any success in the program will doubtless be credited to him and the 92nd Congress; any failure will assuredly be assigned to medicine.

REFERENCES

- ¹Professional Standards Review Organizations. Public Law 92-603, HR-1, Section 249F. 92nd Congress, October 30, 1972
- ²Congressional Rec 116:S-10509-10511 (Daily edition, July 1, 1970)
- ³AMA Board of Trustees and Division of Medical Services: Report Z, Professional Standards Review Organization. Chicago, 1972
- ⁴AMA Board of Trustees: Report E.E. Policy of Professional Standards Review Organizations. Chicago, 1973
- ⁵U.S. Department of Health, Education, and Welfare, Office of Professional Standards Review: P.S.R.O. Program Manual. Rockville, Md., DHEW, 1974
- ⁶Welch CE, et al.: PSROs and norms of care. A report by the Task Force on Guidelines of Care. JAMA 229:166-71, 8 July 74
- ⁷AMA: Summary of Project to Develop Model Sets of Criteria for Screening the Appropriateness, Necessity and Quality of Medical Services in Hospitals. Chicago, July 1974
- ⁸U.S. Department of Health, Education, and Welfare: Utilization Review. Part II—Conditions of participation—hospitals and nursing facilities. Part III—Medicaid. Federal Register 3941604-8; 41610-18, 29 Nov 74



ONE SENTENCE ESSAY

Fear of unpredictable colon changes has made many physicians wary of performing dermabrasion on non-white races.

. . . Abstract of paper in the ALEXANDRIA MEDICAL JOURNAL.



Protest has become a disorderly game for 12-year-olds.

. . . John Gardner, Former Secretary of HEW



The Anatomy Of The Judicial Process

The Supreme Court Is Not Out To Destroy The Medical Profession

By Thomas F. Kelleher

While the subject of my remarks this evening has been described by Doctor Caruolo as "The Anatomy of the Judicial Process," tonight's topic also might be entitled "There Are Judges and Judges and Judges." This last title was suggested some time ago by a friend of mine who had his Ph.D. in education. What great delight he took in telling one and all how he would call up any of the area's better eating establishments and tell them he was "Doctor so and so" looking for accommodations, and how when he drove up to the eatery the red-satin cord would be lowered and the "Doctor" and his party would be ushered to the best table in the house. Little did the *maitre d'* know the exact status of the gentleman who was following him. The *maitre d'* had failed to realize that there are all sorts of doctors. As you are well aware, we have doctors of medicine, osteopathy, dentistry, divinity, philosophy, and what have you. Now, I would hope that when you cast your eyes about the Rhode Island judicial system you will not make the same mistake as the restaurateur, because, as there are doctors and doctors and doctors, so too there are judges and judges and judges.

THOMAS F. KELLEHER, *Associate Justice, Supreme Court of Rhode Island*

An extension of remarks made on April 26, 1974 at the annual meeting of the Providence Surgical Society.

who preside in the various courts operated by the State of Rhode Island. It is my hope that here this evening I can give you a better awareness of where the judges you may know fit within this state's judicial spectrum, and, having finished that task, I will offer a comment or two on some of our recent judicial pronouncements that relate to your profession.

COURT STRUCTURE

Rhode Island's judicial power is vested by our state's constitution in "one supreme court" and in "such inferior courts" as the Legislature "may from time to time ordain and establish." Since 1969 we have had a three-tiered state judicial system with the District Court and various other courts on the bottom tier, the Superior and Family Courts on the second tier, and the Supreme Court on the top tier.

The District Court is composed of a Chief Judge and 12 Associate Judges.¹ It has a full-time bench. It hears all civil cases involving claims of \$5,000 or less and the lesser criminal offenses called misdemeanors. District Court judges can be assigned to sit temporarily in the Superior and Family Courts. Also found on this tier are the Probate² and the Municipal,³ or, as they are sometimes called, Police Courts. An appeal may be taken from any adverse decision given in a District, Probate, or Municipal Court to the Superior Court.

The Superior Court is on level two and is the court of original trial jurisdiction for all felony proceedings and all civil matters in which the amount in controversy exceeds \$5,000. It also grants equitable relief and listens to appeals from administrative agencies. Presently in the Superior Court there are a Presiding Justice and 14 Associate Justices.⁴ Also on level two we find the Family Court — a court whose jurisdiction is limited to matters involving the family unit. It adjudicates cases involving divorce, support, custody of children, and adoption. It also hears cases involving the delinquent, wayward, or truant juvenile. There are a Chief Judge of the Family Court and 6 Associate Justices.⁵ From any decision of the Superior or Family Courts there is an absolute and free right of appeal to the Supreme Court. I use the word "free" because there is no fee charged for an appeal to our court.

I would pause at this time to make reference to an administrative tribunal of which many of you are well aware. It is the Workmen's Compensation Commission. It has been described as "a court of law in all but name." The Commission's primary function is to determine whether a worker's injuries are work-related and consequently compensable under the pertinent law. The Commission consists of a chairman and two commissioners.⁶ The actions of the Commission are subject to review in the Supreme Court.

THE SUPREME COURT

The Supreme Court is located in the Providence County Courthouse. It is sometimes referred to as the court of last resort, since final appeals are heard there. It renders when requested advisory opinions to the Governor and the General Assembly. As of this spring (1974) we will provide this same service to our brother or sister judges who are members of the federal judicial system. Our court has general supervisory control over all the trial courts. It also regulates a variety of other matters including the practice of law and the processing and determination of complaints about attorneys' alleged unprofessional conduct. We have just recently revised and promulgated rules embodying a code of judicial ethics.

There are five of us on the Court. We each have our chambers on the seventh floor of the courthouse. On the extreme northwest corner of our floor is found a well-appointed and truly impressive area which is designated as the conference room. It is there we meet and, when the occasion

demands, put on our judicial robes. When our Court convenes, two sliding doors part, the sheriff announces to all present, "The Honorable Supreme Court," two beautiful aqua blue curtains part, the five of us come out from the conference room onto the podium, take our respective seats, and it's "another opening of another show."

During the time I sat as an attorney with the spectators, I often wondered about the inner operational aspects of the Court. Briefly, I will strive to give you a firsthand account of this phase of our routine.

To do so I have to begin at 9 a.m. on the first Monday in the first full week of October. Today is the beginning of the court year. We will hear 25 cases this week. We use the rotation method of assigning cases. In some states the Chief Justice assigns the cases, and in other jurisdictions cases are drawn by lot. Last year the rotation began with the first case of the 1973-74 term going to Brother Joslin, the second to Brother Doris, I took the third, the senior Associate Justice Brother Paolino took the fourth, and the last case went to the Chief Justice. Since three members of the Court have kin who appear before it, disqualifications in those instances cause several changes in our rotation system.

We operate on a continuous calendar. Once the papers of a case are docketed in our clerk's office, the appealing party's brief is due 40 days thereafter. Twenty days after the brief is filed, the other party's brief is due. The case goes on the calendar.

In the courtroom we listen to oral arguments. We have read the briefs sometime prior to the hearing date. Ordinarily each side is allowed one-half hour. At the conclusion of the day's arguments we have a post-argument conference. This is a general give-and-take as to how each man feels at that particular point. At the end of Friday's arguments, each man has five cases to write. Usually argument week is a washout insofar as the writing part of the job is concerned. With arguments, post-argument conferences, and the reading of briefs there is little time for the truly tough part of the job — the three R's — "reading, 'riting, and research." These activities take place in the three or four weeks remaining before the first full week of a new month rolls around and we return to the courtroom for another five days of hearing arguments and questioning the advocates.

(Continued on next page)

With hearing week out of the way we spend the bulk of our remaining courthouse time sequestered in our individual chambers trying to compose a masterpiece of literary style and legal reasoning. We do assemble at least one day a week in our conference room for what is referred to as our weekly conference. Our own workaday rule provides that any draft opinion which has been circulated to the other four justices by noon on a Friday is on the calendar or agenda for discussion and perhaps a vote at the court's next conference. Ordinarily conference day is scheduled for the middle of each week. On conference day, usually at 10 a.m., I leave my chambers, which are at the extreme southeasterly corner of the building, and walk down the corridor meeting my brother justices on the way. We enter the conference room taking along with us the drafts that were circulated during the prior week. In addition we may have from a half-dozen to perhaps as many as 20 files containing a variety of motions or petitions, such things as requests that we invoke our inherent constitutional power to review the decision of some administrative tribunal such as a zoning board or the Department of Employment Security's Board of Review, petitions to stay the effects of judgments entered in the trial court, petitions to be admitted to bail, or habeas corpus petitions from those who are incarcerated at the Adult Correctional Institutions seeking what we call post-conviction relief. There are times when, in addition to the motions and the drafts, other matters must be resolved, such as reports of our committees relating to the discipline of the bar or the ethical conduct of the judiciary. The rules of the various trial courts are not effective until they receive our approval. Within recent times we have expended considerable time and energy completely revamping the rules applicable to practice before our court.

There are just the five of us present in the conference room during the time we consider the day's agenda. The Chief Justice, by tradition, is the last one to arrive. He sits at the head of our large oval table. The senior Associate Justice Paolino sits to his immediate right, while the next senior man, Justice Joslin, sits to the Chief's immediate left. I sit to the right of the senior Associate, and Mr. Justice Doris, being the last man aboard, sits directly across the table from me.

As each draft is considered, the discussion begins with the Chief Justice and works its way to the other end of the oval table.. Discussion

ended, we vote. The vote follows a reverse pattern. Doris votes first, Kelleher second, Joslin third, Paolino fourth, and the Chief Justice last. Sometimes there is a dissent. The dissenter is given an opportunity to put his thoughts on paper. He circulates his draft. Several times during the past years a dissenter has convinced a majority of his associates as to the soundness of his position, in which case the dissent becomes the majority opinion. Sometimes there is complete agreement, and what was a minority opinion becomes a unanimous opinion. The average person has no idea of the give-and-take that often goes on before the necessary majority in a given instance is attained.

Once October comes, the seventh-floor treadmill begins its annual operation. Before we know it October goes and it's the first week of November and another 25 cases await our consideration, and the individual justice's backlog begins to build. We will sit this court year (1973-74) for about seven weeks of argument, *i.e.*, the first full weeks in October, November, December, February, March, April, and May. January and the period from June to September are catch-up months as we attempt to reduce the backlog of opinions to be written on cases argued earlier. This means that, if all things go well, we should hear at least 175 cases. This averages out to about 35 cases a man. In addition there is usually an extra case or two specially assigned, plus the replies to requests for advisory opinions which emanate from the state's chief executive or the General Assembly.

It has been my experience that, once I show up at 250 Benefit Street (that's the courthouse's official address) on the first Monday in October, I will not have a clean desk until the following mid-September. The writing part of the job continues to go on during the summer. Last year air conditioning came to the seventh floor, and it has been very much appreciated. One must remember that a case does not end with the completion of the first draft. There are rewrites, dissents, and a variety of judicial duties that tend to divert one from keeping up with his literary efforts.

NATURE OF AN APPELLATE COURT

The appellate court differs considerably in nature and practice from a trial court. The trial judge is the boss of his courtroom. He need not seek the support of his brother in espousing his view of the law. In today's busy times a trial judge just does not have the opportunity to sit down and devote a week or so to ponder and contemplate the controversy he must decide. On the sev-

enth floor things are a bit different. We see no witnesses. We hear no testimony. We decide only questions of law. The factual disputes are resolved in the trial court. We have the time that is not available to a man or woman on the trial level. We are a body of five equals. We spend more time together than we do with our families. Discussions can be spirited. Our motto has been, "Disagree if you wish, but please do not be disagreeable," and we have been very fortunate in this respect. There are some appellate courts in the land where tempers do get short and brother judges find it hard to have any degree of collegiality.

We write, as we say, for posterity, and this task demands a fair degree of concentration and an earnest desire for accuracy. After a case passes conference, it is rechecked by the court secretary and her staff for accuracy as to facts, citations, and the law quoted therein. A grammarian then checks our efforts for semicolons, dashes, dangling participles, and split infinitives. After this the draft returns to the judge who, having in mind the suggestions made during the checking process, gives it a final check. It is then given a final typing and returned to the court secretary for a final reading. The secretary takes it to the clerk's office. The Xerox machine starts to roll, and, early the next morning, our clerk calls the respective attorneys and gives them the good or the bad news.

During the past eight years our Court has been referred to as the Roberts Court. It has been marked by the philosophy that, if the law has been made by judges, it can, upon a proper showing, be changed by judges. Years ago our predecessors were more inclined to direct litigants desirous of changing the law to the state house rather than effect the change in the courthouse.

For those whose interest may be the statistical rather than the philosophical aspects of our operations, I would point out that an analysis of our production indicates an average time from the date of hearing arguments to the time of publishing an opinion to be between six and ten weeks. Some opinions, of course, take longer than others. Our recent medical malpractice cases, to which I shall refer as Wilkinson No. 1 and Wilkinson No. 2, fall within the longer category. I will briefly review their facts.

WILKINSON CASES

In mid-1951 Winifred Wilkinson, a woman in her thirties, complained to her family physician about radiating pain in her extremities. Winifred

entered Roger Williams General Hospital for a week's duration. A chest x-ray taken just prior to her discharge showed a "shadow." Winifred returned to the hospital where radiation therapy was commenced. The radiologists who gave the therapy diagnosed the shadow as a malignant tumor in the patient's upper mediastinum. The therapy, which extended over a number of days, was given at four different intervals during the period beginning in August 1951 and ending in January 1952. In 1955 Winifred noticed a discoloration in her chest and back area which ultimately required her to seek repair through plastic surgery.

Suit against the radiologists was commenced in 1962. The radiologists first contended that the suit was barred by the statute of limitations. The statute at that time required that suit for damages for personal injuries be commenced within two years after the cause of action accrued. The defense contended that, since Winifred's suit was not brought until some ten years after the treatment had been given, her suit was a nullity. On appeal, we ruled in Wilkinson No. 1 that the limitations period did not begin to run until the malpractice was discovered or when with due diligence it should have been discovered by the patient. While many attorneys applauded this holding, their enthusiasm, I am sure, might be tempered by the realization that this same discovery principle has been extended to all cases involving professional malpractice including that of such individuals as accountants, architects, and attorneys. The Massachusetts Supreme Judicial Court, relying on the discovery principle, has recently ruled that an attorney who certified that a client had good title to his real estate could be sued nine years later when the client tried and failed to sell his property because the lawyer in his title search had failed to find a recorded easement.

The actual trial of Winifred's claim was held in 1970. Two plastic surgeons and a pathologist testified that Winifred's injuries were caused by x-ray treatment. The radiologists were called to the stand by the patient's attorney, and they testified concerning their diagnosis and the treatment given Winifred. At the close of the presentation of the patient's evidence, the trial justice terminated the case by ordering that a verdict be entered in favor of the radiologists. Winifred appealed, and this set the stage for Wilkinson No. 2.

Winifred's suit was based on three different grounds. She alleged that (1) the physicians had

(Continued on next page)

incorrectly diagnosed her ailment; (2) they improperly administered the x-ray therapy; and (3) they had failed to obtain her knowing consent to the treatment given her.

I think it advisable to point out to you the procedural posture in which Wilkinson No. 2 came before us. The case was before us on the patient's appeal from the trial justice's grant of the radiologists' motion for a directed verdict. At the conclusion of the presentation of evidence in support of the patient's claim, the trial justice took the case away from the jury and ordered that verdicts be entered for the physicians. When a trial judge is asked to direct a verdict, he cannot weigh the evidence or pass on the truthfulness of the witnesses' testimony, but he is obliged under Rhode Island law to view the evidence in a light most favorable to, in this case, the patient, and give her the benefit of all the reasonable inferences that can be gleaned from the evidence. On an appeal from the trial court's grant of a directed verdict the Supreme Court must take a similar view of the record.

In considering Winifred's claim of a misdiagnosis and improper treatment, we adhered to the general rule that evidence to support such assertions must be presented by experts who can show that the physician in question has not exhibited the same degree of diligence and skill that is commonly possessed by those engaged in the same type of practice within the community, having due regard for the state of scientific knowledge at the time of diagnosis or treatment. In Wilkinson we ruled that there was no necessity for Winifred to obtain her own experts since the requisite standard of care had been established by her attorney's interrogation of the radiologists under Rhode Island's so-called adverse witness statute. Under this law the party initiating the litigation can call the other party to the proceedings as a witness and interrogate him as to various facets of the suit. Here, the patient's attorney called both physicians to the witness stand and examined them as to the treatment given his client.

Both radiologists testified that they would not have recommended the course of therapy given Winifred unless they were "convinced" she had a malignancy. One of the radiologists declared that this standard was in accordance with the accepted practice in his profession. The senior radiologist, a gentleman who had spent 30-odd years practicing his specialty in Rhode Island, conceded that a biopsy was a recognized diagnostic procedure.

The plastic surgeons and the pathologist made it quite clear that a biopsy supplies the proof positive of the tumor's status. No biopsy had been performed on Winifred at any time during her numerous hospitalizations at Roger Williams General Hospital.

The radiologists took the position that it was the duty of Winifred's family physician to recommend this procedure. However, there was testimony that Winifred had been referred to the radiologists as their private patient. The patient testified that she regarded the radiologists as her attending physicians in x-ray. We observed that, even if medical protocol required that it be the family physician who recommends the biopsy, the radiologists should at least have suggested to the family physician that this procedure be performed.

Biopsies were performed during the time Winifred was under the care and treatment of the plastic surgeons. These tests manifested no indication of malignancy. Winifred testified that in 1960 a physician, who is described in the transcript as a "chest specialist" and who served as a consultant during the 1951-52 therapy session, later informed her that she never had cancer. Winifred's report of her conversation with the "chest specialist" provided one evidentiary basis for her claim of an incorrect diagnosis. Furthermore, we ruled that the testimony by the plastic surgeons and the pathologist as to the absence in 1960 of a malignancy gave rise to two reasonable inferences: either the x-ray treatments had destroyed the cancer, or Winifred never had one. Having in mind the rules governing the disposition of a motion for a directed verdict, the trial judge and we were bound to give Winifred the benefit of the second inference. However, if the case had gone to the jury, its members could have been free to reject Winifred's testimony as it related to the chest specialist's conversation and they could have believed that the therapy had cured the cancer.

The evidence pertinent to the negligent treatment facet of Winifred's claim indicates that the radiation therapy consisted of exposing three areas of the patient's chest to the x-ray beam. Portions of the back that were supposed to be directly opposite the exposed areas of the chest were also treated. Both radiologists emphasized that an overlapping of the different fields of exposure was to be avoided. During the course of therapy two x-ray filters were used. One was round with a diameter of 15 centimeters. The other was square with each side measuring 15 centimeters. The de-

tendant radiologists explained that, in order to insure no overlap, it was essential that the filter be in the exact center of the exposure field each time treatment was given. The radiologists alternated in the daily administration of the treatment. The senior radiologist described the centering of the filter in such terms as "about five to eight centimeters" to the right of the body's midline or a "little below" the left nipple "approximately" five to six centimeters below the center of the clavicle. Such impreciseness in measurements, we said, when considered with the condition of Winifred's ulcerated chest, could support an inference that the requisite certitude in focusing the filter had not been attained. Accordingly, we held that the radiologists themselves had provided the requisite expert evidence upon which the jury might have found negligence in their treatment of Winifred.

One additional remark should be made before leaving the treatment phase of the case. The hospital records showing Winifred's daily schedule of treatments indicated that she had received a double exposure, an incident which it was conceded should be avoided. The radiologists described this entry in the hospital record as a "typographical error." We said that, since a motion for a directed verdict was pending, the decision as to whether the entry was or was not a typographical error was for the jury, not the judge.

INFORMED CONSENT

The final phase of Wilkinson No. 2 concerns the doctrine of "informed consent," a term which may suggest to you new vistas of professional liability, but to the judiciary is the embodiment of the well-recognized right of every *competent adult* to determine what shall be done with his body. In Wilkinson No. 2 we stated that it was not necessary when informing the patient of the risks involved in a procedure that a member of the medical profession tell the patient all the possible risks involved. However, we did say that the patient is entitled to be informed of *all the known* material risks peculiar to the proposed procedure. We also went on to remark that there are circumstances in which there is no need to disclose — such as an emergency or instances wherein the physician believes disclosure would be unduly detrimental to the patient's well-being. We further observed that there was no need for the revelation of the risks that are likely to be known by the average patient or may be known because of the patient's past experience.

We ruled that in matters of informed consent a

patient was not obligated to present expert testimony demonstrating a community standard of disclosure. We did, however, recognize that a physician could introduce evidence concerning the standards in the community to support his lack of disclosure. A patient is still required to present expert testimony as to the existence of the risk involved in the procedure in controversy. We ended our discussion on informed consent by advising the physicians that more communication with the patient means less litigation, and cited as support for this proposition a text available at the Rhode Island Medical Society's Library, *Doctor and Patient and the Law*, Morris and Moritz (1971 ed.). Dr. Allen R. Moritz is a physician.

Wilkinson No. 2 was published on October 20, 1972. Our observations relative to the doctrine of informed consent were somewhat similar to those adopted in the spring of 1972 by the Federal Court of Appeals for the District of Columbia. One week after Wilkinson No. 2 was published, the California Supreme Court made a similar pronouncement. Recently, Wisconsin has joined the ranks of jurisdictions which have absolved the patient of the burden of presenting expert testimony as to the amount of information that should be given the patient.

As stated before, Wilkinson No. 2 was filed in late October 1972. Things continued to remain serene on the seventh floor for a while. In early December a "friend" sent me a note which said, "Now we know who to blame for rising hospital costs," and attached to the note was the front page of a two-page "Memo" that had been distributed by the Hospital Association of Rhode Island (HARI). The Memo reported on that portion of Wilkinson No. 2 which addressed itself to Winifred's claim for a misdiagnosis. After having referred to the lack of any biopsy being performed prior to the administration of the x-ray therapy, we had said, "If a physician, as an aid to diagnosis, does not avail himself of all of the scientific means and facilities available to him so that he can obtain the best factual data upon which he can make a diagnosis, such an omission can be considered as evidence of negligence."

The association's Memo reported on its law firm's concern that a literal reading of the sentence I have just quoted would place a physician at an unfair disadvantage. The association's distinguished and most capable counsel, after speaking of the ease with which a patient could avoid

(Continued on page 66)

An Antibiotic Update: I. New Penicillins And Cephalosporins

Decision To Use A New Product Should Be Based On Specific Individual Situations And Clear Advantages.

By Phillip J. Rubin, M.D. and Stephen H. Zinner, M.D.

In the past few years a number of new antibiotics have been introduced. Recently several new cephalosporin antibiotics have become available, and in the near future two new aminoglycoside antibiotics will be released for clinical use. The clinician is now faced with additions to his therapeutic armamentarium which may or may not be improvements over older, more familiar agents. The decision to use a new product should be based on specific individual clinical situations, and the drug should offer some clear advantage to the patient.

This review will present, in concise form, a summary of the indications, antimicrobial spectra, Dosage and side effects of several new antibiotics.

The penicillins and cephalosporins are discussed in this section; a review of the new aminoglycosides and other antibiotics will follow.

THE NEW PENICILLINS

1. Carbenicillin — (Geopen®-Roerig; Pyopen®-Beecham-Massengill)

PHILLIP J. RUBIN, M.D., *Fellow, Infectious Diseases, Brown University Program in Medicine*

STEPHEN H. ZINNER, M.D., *Assistant Professor of Medical Sciences; Head, Division of Infectious Diseases, Section of Medicine, Brown University*

This article is one of a series of papers supported by the continuing education program of the Rhode Island Health Science Education Council.

This penicillin derivative is active against Gram-negative as well as Gram-positive bacteria. Its spectrum of activity includes sensitive strains of *Pseudomonas aeruginosa*, *E. coli*, indole negative (*Proteus mirabilis*) and some indole positive *Proteus* species (*P. morgani*, *P. rettgeri*, *P. vulgaris*), *Salmonella*, *Streptococcus pyogenes*, *Hemophilus influenzae*, *Clostridia* and *Bordetella* sp. It is not active against penicillinase producing (penicillin resistant) staphylococci.^{1,2,3} In general most *Klebsiella* are resistant.⁴

The combination of carbenicillin and gentamicin is synergistic against *Pseudomonas aeruginosa* *in vitro* as well as in clinical situations.⁵

Carbenicillin is marketed for intravenous use as a disodium salt which contains 4.7 meq of sodium per gram. Since the concentrations of carbenicillin necessary to inhibit *Pseudomonas aeruginosa* are high (50-200 ug/ml), and since a large dose is required to achieve adequate blood levels (30-40 grams per day), the attendant sodium load must be considered in the treatment of infection in patients with congestive heart failure or renal impairment.⁶ Impairment of platelet function, sometimes manifest as post-operative bleeding, has been described with carbenicillin.⁷ Hypokalemia and metabolic alkalosis have also been described.^{8,9}

Five grams of carbenicillin given intravenously over 15-30 minutes result in blood levels of 300

ug/ml or more. Since more than 60 per cent of intravenous carbenicillin is recoverable unchanged in the urine within 6 hours, extremely high urine concentrations result. Cerebrospinal fluid levels are low — 20-30 per cent of blood levels —, and carbenicillin is not generally useful for meningitis due to Gram-negative rods.¹⁰

In patients with normal renal function the serum half-life is about one hour. As creatinine clearance approaches 30 ml/min, the half-life is increased to four hours; and in patients with both renal and hepatic dysfunction, even greater prolongation of half-life may occur. Thus, moderate reduction of dose is necessary in patients with renal or hepatic insufficiency. The major indications for carbenicillin are for serious bacteremia due to sensitive Gram-negative bacilli. It is frequently given with gentamicin with which it is synergistic against *Pseudomonas*.¹⁰

2. Indanyl Carbenicillin — (Geocillin®-Roe-rig)

This is an oral form of carbenicillin which, unlike the disodium parenteral preparation, is acid stable and absorbed via the gastrointestinal tract. Serum levels are low, and concentration takes place in the urine where the concentration is high enough to inhibit most sensitive strains of *Proteus* and *Pseudomonas*.¹² Side effects include an unpleasant taste, nausea, diarrhea, flatulence, rash and pruritis. Its main use is in treating recurrent or chronic urinary tract infection due to sensitive strains of *Pseudomonas*, *Enterobacter* and *Proteus* sp.¹² It should be reserved for infections with organisms resistant to older and more common antimicrobial drugs.

3. Amoxicillin — (Amoxil® — Beecham-Mas-sengill; Larocin®-Roche)

Amoxicillin is a newly released semisynthetic penicillin, structurally related to ampicillin. Its antimicrobial activity is virtually identical to that of ampicillin, and it is active against non-penicillinase producing *Staphylococcus aureus*, *Streptococcus pyogenes*, Group D *Streptococcus* (*Enterococci*, *S. faecalis*), *Streptococcus pneumoniae* (pneumococcus), *Streptococcus viridans*, *Neisseria meningitidis*, *N. Gonorrhea*, *Salmonella*, and *Shigella*. Penicillinase producing *Proteus*, *Aerobacter*, *Pseudomonas*, and *Enterobacter aerogenes* are not susceptible. Most *Klebsiellae* are also resistant. Most *E. coli* and some *H. influenzae* are susceptible.¹³ The major difference from ampicillin is the degree of intestinal absorption. Both blood levels and urinary excretion are twice that of ampicillin

on a weight basis.¹⁴ The difference in antimicrobial activity appears to be limited to amoxicillin's slightly increased activity against *Salmonella* and its decreased activity against *Shigella*^{15, 16, 17} relative to ampicillin.

One potential advantage of amoxicillin over ampicillin seems to exist, however, in a lower incidence of gastrointestinal side effects. In one study in children severe diarrhea was found less frequently with amoxicillin when compared to ampicillin.¹⁷ Amoxicillin and ampicillin are ineffective against penicillinase producing organisms; thus, penicillin resistant staphylococci are also resistant. The usual dose is 250-500 mg orally every 8 hours for mild and moderate infection. An intravenous form is available and results in higher blood levels than ampicillin with comparative doses.

4. Hetacillin — (Versapen®, Bristol)

Hetacillin is another drug which is closely related to ampicillin; in fact, it is rapidly hydrolyzed to ampicillin in the blood and has an antimicrobial spectrum and dosage virtually identical to that of ampicillin.¹⁹

THE NEW CEPHALOSPORINS

Several new cephalosporins have been introduced recently. In general, these have antibacterial spectra similar to cephaloridine (Loridine®-Lilly) and cephalothin (Keflin®-Lilly). Most penicillinase producing staphylococci, streptococci (except Group D *Streptococci* (*Enterococci*, *S. faecalis*)) *Neisseria* sp., *E. coli*, *Shigella*, *Salmonella*, *Proteus mirabilis*, *Klebsiella pneumoniae* are sensitive *in vitro*. *H. influenza*, other *Proteus* species and *Enterobacter* species are less sensitive or resistant. *Pseudomonas* and most *Enterobacter* are highly resistant.^{1, 2, 3}

Patients receiving cephalosporins other than Loridine® must be closely watched for signs of meningitis as this group of drugs does not adequately penetrate the blood brain barrier, and cerebrospinal fluid levels are low. Meningitis has developed in patients treated with cephalosporins for bacteremia with sensitive organisms.¹⁹

Five per cent of patients treated with cephalosporins develop side effects: eosinophilia, rash, serum sickness, transient neutropenia, and anaphylaxis, although the more serious of these side effects are rare.²⁰ A positive Coombs reaction is often seen with higher doses of these drugs, but hemolytic anemia does not necessarily occur.²¹

A variable incidence of cross allergenicity in patients who are allergic to penicillins has been

(Continued on next page)

reported.²² Superinfections with Gram-negative organisms are also seen.

1. Cefazolin — (Ancef®-SK&F; Kefzol®-Lilly)

This is a parenteral preparation which is more slowly excreted than cephalothin and, therefore, produces higher, more sustained blood levels. As with all cephalosporins, the main route of excretion is via the kidneys, where 40-80 per cent of the drug is recoverable in the urine within 4 hours of administration.²³⁻²⁴ It appears slightly more active against *E. coli* and *Proteus mirabilis* and slightly less active against Gram-positive cocci than cephalothin and cephaloridine.^{25, 26} The main advantages of cefazolin are the apparent lack of renal toxicity,²⁷ less assessed pain on intramuscular injection, and a lower incidence of phlebitis.^{28, 29} The usual dose is 500 mg to 1 g every 6 hours intravenously or intramuscularly. Dosage should be reduced in patients with renal impairment²⁴ and may be increased in severe infection. There is no role for cefazolin in the treatment of meningitis or other central nervous system infections.

2. Cephapirin — (Cefadyl®-Bristol)

This is another of the recently released parenteral cephalosporin preparations. Its antibacterial spectrum is almost identical to the other cephalosporins. Although phlebitis and pain on intramuscular injection may be less frequent than with cephalothin, most studies fail to report significant differences from cephalothin.^{28, 29} Dosage recommended is 500 mg to 1 g every 4-6 hours or higher doses in severe infection.

THE ORAL CEPHALOSPORINS

The first oral cephalosporin available in the U.S. was cephaloglycin (Kafocin®-Lilly). This drug is absorbed poorly from the gastrointestinal tract and produces blood levels which are inadequate for the treatment of systemic infections.

1. Cephaloglycin, like the other cephalosporins, is excreted in the urine and, thus, concentration provides adequate urine levels to treat sensitive organisms in the urine.³⁰

2. Cephalixin — (Keflex®-Lilly)

Although this drug is absorbed from the gastrointestinal tract more completely than cephaloglycin, it is less active on a per weight basis than cephalothin or cefazolin.^{30, 31} The spectrum of activity is similar to the other cephalosporins. Notably, cephalixin is 200 times less active than penicillin G against pneumococci.

It is almost completely absorbed from the gastrointestinal tract and excreted unchanged in the urine.³²

Cephalixin is equivalent to oral penicillin with respect to relapse rate in the treatment of beta-hemolytic streptococcal soft tissue infections.^{32, 33} Urinary tract infections with sensitive strains respond well because of the high concentration of cephalixin excreted in urine. Although some patients with pneumococcal pneumonia respond to cephalixin, this drug is not recommended for serious infections. The usual dose of cephalixin is 250 mg to 500 mg four times daily.

Side effects are few, and the incidence of nausea, vomiting, and diarrhea is somewhat lower than that seen with many of the other broad-spectrum oral antibiotics (ampicillin, tetracycline, and sulfonamides). A falsely elevated test for urine glucose may be found in patients treated with this drug.³³

3. Cephradine — (Anspor®-SK&F; Velosef®-Squibb)

The newest oral cephalosporin is also well absorbed from the gastrointestinal tract. There are relatively few clinical studies of this drug. *In vivo* studies in animals and man show adequate serum levels for inhibition of most sensitive bacteria.³⁴

One British study showed good clinical response of a small number of patients with respiratory infections.³⁵ Cephradine may be converted in part to cephalixin *in vivo*, and is probably equally as effective as cephalixin.³⁶ The dosage and side effects are similar to cephalixin.

REFERENCES

- 1 Garrod LP, Lambert HP, O'Grady F: *Antibiotic and Chemotherapy*. Fourth edition. Edinburgh, Churchill Livingstone, 1973
- 2 Ries K, Kaye D: The newer antibiotics. *Med Clin North Am* 57:1065-78, Jul 73
- 3 Barker BM, Prescott F: *Antimicrobial Agents in Medicine*. Oxford, Blackwell Scientific Publications, 1973. P. 82
- 4 Carbenicillin. *Med Lett Drugs Ther* 12:41-2, 15 May 70
- 5 Smith, CB, Wilfert JN, Dans PE, et al.: In-vitro activity of carbenicillin and the results of treatment of infections due to *Pseudomonas* with carbenicillin singly and in combination with gentamicin. *J Infect Dis* 122:Suppl:S14-28, Sep 70
- 6 Hoffman TA, Cestero R, Bullock WE: Pharmacodynamics of carbenicillin in hepatic and renal failure. *Ann Intern Med* 73:173-8, Aug 71
- 7 Brown CH, Natelson EA, et al.: The hemostatic defect produced by carbenicillin. *N Engl J Med* 291:265-70, 8 Aug 74
- 8 Brunner FP, Frick PG: Hypokalaemia, metabolic alkalosis, and hypernatraemia due to "massive" sodium penicillin therapy. *Brit Med J* 4:550-2, 30 Nov 68
- 9 Hoffbrand BI, Stewart JD: Carbenicillin and hypokalaemia. *Brit Med J* 4:746, 19 Dec 70
- 10 Hewitt WL, Winters RE: The current status of parenteral carbenicillin. *J Infect Dis* 127:Suppl: 120-9, May 73

(Continued on page 68)

MINIENDOSCOPY

Just as fiberoptics has extended the range and scope of hollow organ endoscopy (fiberoptic colonoscopy, gastroduodenoscopy, and bronchoscopy), miniaturization of optical components appears to be giving new life to body cavity endoscopy. Recent reports indicate that there is a race for the smallest possible instruments. Both peritoneoscopy and thoracoscopy have been around for many years. As long ago as 1950 a series of 396 peritoneoscopies was reported from the Mayo Clinic. Yet earlier investigators did not gain many adherents despite an extensive experience, probably due to the relatively poorer visualization through the older instruments and a relatively greater danger of visceral injury upon penetration of the abdominal wall because of the large diameter of the trocars.

Berci and co-workers¹ recently reported use of a peritoneoscope with a new optical system (called "rod-lens," with alternating glass rods and air spaces replacing alternating air spaces and glass lenses), which permits smaller size trocars (7mm in diameter as contrasted with the 10 and 12mm diameter of the older instruments). It has advantages of safer penetration of the abdominal wall, increased light transmission, brighter image, improved resolution, wide viewing angle, and great depth of field through the miniaturized telescope, incorporating image and fiberlight transmissions. A variety of manipulating and operating instruments can be introduced through a second smaller (5.5mm) trocar under visual guidance. Some of the instruments are insulated for high frequency cutting or coagulation current, permitting hemostasis, lysis of adhesions, or tubal sterilization. There are also a special biopsy forceps and a combined coagulation-suction device. Other accessories permit photographic documentation. A special pneumoperitoneum needle prevents visceral per-

foration. One third of Berci's cases could be done under local anesthesia. This type of equipment has been a factor in the recent renewed popularity of laparoscopy and culdoscopy among gynecologists.

Compared to a still smaller instrument, however, the above equipment appears Brobdignagian, Ash and Manfredi² have described a tiny endoscope with optical instruments no larger than a 12 or 14 gauge biopsy needle with the imaginative name of needlescope. The advanced degree of miniaturization has been possible because of a new graduated index-of-refraction lens. Two endoscopes 100mm in length and 1.7mm and 2.2mm in diameter were used. Outside matching cannulas for these instruments measure 2.0 and 2.7 mm in diameter respectively. The larger instrument permits 16mm *motion pictures!* Biopsy of the lung and pleura are carried out by the insertion of separate biopsy needles. Most of the lateral lung and lateral chest wall could be visualized.

Peritoneoscopy as in thoracoscopy, requires the injection of air. Separate insertion of biopsy needles under vision is carried out here as well. Most of the anterior peritoneum and anterior liver surface could be inspected. Peritoneal implants or other lesions and the liver have been biopsied. While the same degree of instrumentation as with the larger instrument described above does not appear to be feasible, visualization of a considerable degree and biopsy have been facilitated, since local anesthesia without premedication or sedation is practically always possible.

The advances in endoscopy here described appear to be significant contributions to the medical armamentarium.

REFERENCES

- ¹Berci G, Shore JM, et al.: The evaluation of a new peritoneoscope as a diagnostic aid to the surgeon. *Ann Surg* 178:37-44, Jul 73
- ²Ash SR, Manfredi F: Directed biopsy using a small endoscope. *N Engl J Med* 291:1398-9, 26 Dec 74



THE ANATOMY OF THE JUDICIAL PROCESS

(Continued from page 61)

having a directed verdict entered for the physician, said that "if a doctor is to be safe, he may be legally required, no matter what the patient's symptoms may be, to examine his patient in all cases for all possible maladies to which the human race falls victim." The memo also noted the presence of the State Director of Business Regulation, Albert B. West, at the association's annual meeting. It quoted the director as saying, "I think the decision could run the cost of medical care right through the roof." I had just about finished reading the memo when I purchased the PROVIDENCE EVENING BULLETIN for December 19, 1972. There, on the front page, was a story written by the paper's distinguished correspondent Selig Greenberg. A banner headline read "Malpractice Decision Threatens R. I. Medical Costs." Mr. Greenberg gave a masterful summary of the 32-page opinion and told of the association's and Mr. West's anxieties as to the potential impact of the diagnostic portion of Wilkinson. The article also told of a 50 per cent increase in the cost of medical malpractice insurance.

While the director's apprehension for the rising cost of hospitalization and "HARI's" solicitude for the physician who might find himself a defendant in a malpractice action are most commendable, it seems to me that no one can argue with the proposition that the patient, be he rich or poor, has the right to expect that his physician will make use of the best possible sources of information available to him to determine what is wrong with the patient before he embarks upon a course of treatment. If one's reading of Wilkinson No. 2 causes an increase in the use of defensive medicine, so be it. Defensive medical practice is not necessarily bad when one considers that we

are dealing with human life. The patient will be better off for the extras performed, and perhaps the physician who may view each patient as a potential litigant will breathe just a bit easier.

OTHER CASES

Since the days of Wilkinson, we have considered two malpractice cases. In each of these situations the case did reach the jury and the jury returned a verdict for the doctor. The first case involved a dentist, now deceased. The issue was whether he had told the patient of the risks involved in a very complicated procedure involving the use of dental implants. The dentist insisted that he had so informed the patient, and the patient testified to the contrary. The jury believed the dentist. In the second case, very recently we approved a jury verdict for a former chief resident at what was the Providence Lying-In Hospital. The resident was long on his knowledge of obstetrics but a little short when it came to mathematics. His negligence concerned a sponge that remained in the vaginal area for some time after delivery. The negligence was conceded, but the dispute involved two issues: (1) Did the sponge's presence cause any harm to the patient; and (2) Did the patient commence suit within two years after she became aware of the sponge's presence in her body. The jury found for the resident on both issues.

One of the things of which we live on the seventh floor at 250 Benefit Street are constantly aware is the social and economic impact our efforts and conclusions might have on others. Today's opinion sets the standard of conduct that unquestionably exerts a great deal of influence on the society in which you and I live.

There is no doubt in my mind that the recent judicial expressions made in the area of informed consent prompted the American Hospital Association's promulgation of a "Patient's Bill of Rights." The AHA's enactment stipulated that a patient has a right to receive from his physician the necessary information by which he can give his informed consent prior to the start of any procedure. Such information is to include the disclosure of the pertinent "medically significant risks." Wilkinson No. 2 mandates information pertinent to the "known material risks."⁷ Some can argue that the two phrases are synonymous. The primary objective of the informed consent doctrine is the establishment of a partnership in decision making which assumes that the competent adult patient retains the right to chart his own destiny.

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.

RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

While 1972 might have been the year of the physicians, we have in more recent times considered issues involving other segments of our population, particularly in the public service area, as they relate to collective bargaining rights of policemen, firefighters, and school teachers. In the spring of 1974 we considered the right of the ophthalmologists to challenge a 1971 act of the General Assembly which permits certain optometrists to apply topical drugs to the surface of the eye. In what I personally believe is a significant holding, we departed from the proposition that, since a physician has no property right in his license, he had no standing to sue, and ruled that the ophthalmolo-

gists could, as representatives of the public, upon a proper showing question the constitutionality of the legislation. Each term of court presents us with issues the resolving of which can affect every segment of the Rhode Island community. The responsibility of our court is one that cannot be taken lightly, and I trust that I have at this point persuaded you of that fact.

CONCLUSION

There is no more that I can or wish to offer. I have had my say except that, if the next time you are introduced to a judge you inquire as to what court he belongs, my appearance here this evening has been a success. If you leave the premises this evening somewhat assured that the quintet that occupies the courthouse's seventh floor is not some radical anti-medical cabal that is out to do you and your profession in, then the thoughts I have expressed will have fallen upon "good ground" and hopefully will bear "good fruit."

REFERENCES

- ¹The Chief Judge is Henry E. Laliberte. His associates are Orist D. Chaharyn, Paul J. Del Nero, Anthony J. Dennis, Corinne P. Grande, Francis M. Kiely, Robert J. McOsker, Edward J. Plunkett, Charles F. Trumpetto, Joseph Rodgers, Jr., Walter R. Orme, Antonio S. Almeida, and Victor J. Beretta.
- ²There are Probate Courts in each of the state's 39 municipalities. The bulk of this court's work deals with the supervision of the administration by executors, administrators, and guardians of the estates committed to their care. While each municipality is required to appoint an attorney to the office of Probate Judge, the General Assembly has made one exception. Block Island's town council may still sit as a Probate Court.
- ³There are Municipal Courts in Johnston, Pawtucket, and Providence. Most of the courts' cases involve infractions of municipal ordinances relating to the operation of automobiles or the maintenance of minimum housing standards.
- ⁴The Presiding Justice is Joseph R. Weisberger. His associates are John S. McKiernan, Florence K. Murray, Arthur A. Carrellas, William M. Mackenzie, James C. Bulman, Eugene F. Cochran, Ronald R. Lagueux, Eugene G. Gallant, Anthony A. Giannini, Francis J. Fazzano, Donald Shea, John Orton, III, Thomas H. Needham, and John P. Bourcier.
- ⁵The Chief Judge is Edward P. Gallogly. His associates are Michael DeCiantis, Edward V. Healey, Jr., William R. Goldberg, Jacob J. Alprin, Carmine R. DiPetrillo, and Angelo G. Rossi.
- ⁶The Commission is composed of Chairman Herman D. Ferrara and Commissioners Eugene J. LaFerriere and Donald A. Kingsley.
- ⁷The General Assembly during the last day of its 1974 session passed legislation entitled "A Patient's Bill of Rights." It enumerates certain information that a hospital must give the patient. The Rhode Island act, unlike its national counterpart, omits any reference to the patient's rights in the area of informed consent.



NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY
215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
HOpkins 7-8050

AN ANTIBIOTIC UPDATE

(Continued from page 64)

- ¹¹Turck M: The treatment of urinary-tract infections with an oral carbenicillin. *J Infect Dis* 127: Suppl:133-5, May 73
- ¹²Baker DA, Andreole VT: The treatment of difficult urinary-tract infections with carbenicillin indanyl sodium. *J Infect Dis* 127:Suppl:136-42, May 73
- ¹³Bodey GP, Nance J: Amoxicillin: in vitro and pharmacological studies. *Antimicrob Agents Chemother* 1:358-62, Apr 72
- ¹⁴Neu HC: Antimicrobial activity and human pharmacology of amoxicillin. *J Infect Dis* 129:Suppl: S123-31, Jun 74
- ¹⁵Calderon E: Amoxicillin in the treatment of typhoid fever due to chloramphenicol-resistance *Salmonella typhi*. *J Infect Dis* 129:Suppl:S219-22, Jun 74
- ¹⁶Nelson JO, Hatalin KC: Amoxicillin less effective than ampicillin against *Shigella* in vitro and in vivo: relationship of efficacy to activity in serum. *J Infect Dis* 129:Suppl:S222-7, Jun 74
- ¹⁷Howie VM, Ploussard JH, Sloyer J: Comparison of ampicillin and amoxicillin in the treatment of otitis media in children. *J Infect Dis* 129:Suppl: S181-4, Jun 74
- ¹⁸Neu HC: Newer antibiotics. *DM* 1-46, May 73
- ¹⁹Mangi RJ, Kundargi RS, Quintiliani R, et al.: Development of meningitis during cephalothin therapy. *Ann Intern Med* 78:347-51, Mar 73
- ²⁰Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*. Fourth edition. London, Macmillan Company, 1970. P. 1277-82
- ²¹Petz LD: Immunologic reactions of humans to cephalosporins. *Postgrad Med J* 47:Suppl:64-9, Feb 71
- ²²Goodman LS, Gilman A: *The Pharmacologic Basis of Therapeutics*. Fourth edition. London, Macmillan Company, 1970
- ²³Gold JA, McKee JJ, Ziv DS: Experience with cefazolin: An overall summary of pharmacologic and clinical trials in man. *J Infect Dis* 128:Suppl:S415-2, Oct 73
- ²⁴Rein MF, Westervelt FB, Sande MA: Pharmacodynamics of cefazolin in the presence of normal and impaired renal function. *Antimicrob Agents Chemother* 4:366-71, Sep 73
- ²⁵Garrod LP: Choice among penicillins and cephalosporins. *Brit Med J* 3:96-100, 13 Jul 74
- ²⁶Ries K, Levison ME, Kaye D: Clinical and in vitro evaluation of cefazolin, a new cephalosporin antibiotic. *Antimicrob Agents Chemother* 3:168-74, Feb 73
- ²⁷Madhavan T, Quinn EL, Freimerr E, et al.: Clinical studies of cefazolin and comparison with other cephalosporins. *Antimicrob Agents Chemother* 4: 525-31, Nov 73
- ²⁸Inagaki J, Bodey GP: Phlebitis associated with cephalosporins: cephradine versus cephalothin. *Curr Ther Res* 15:37-43, Feb 73
- ²⁹Cephradine. *Med Lett Drugs Ther* 16:53-4, 21 Jun 74
- ³⁰Griffith RS, Black HR: Blood, urine and tissue concentrations of the cephalosporin antibiotics in normal subjects. *Postgrad Med J* 47:Suppl:32-40, Feb 71
- ³¹Kind AC, Kestle DG, et al.: Laboratory and clinical experience with cephradine. *Antimicrob Agents Chemother* 8:361-5, 1968
- ³²Davies JA, Strangeways JE, Mitchell RG, et al.: Comparative double-blind trial of cephradine and ampicillin in treatment of urinary infections. *Brit Med J* 3:215-7, 24 Jul 71
- ³³Levison ME, Johnson WD, Thornhill TS, et al.: Clinical and in vitro evaluation of cephradine. A new orally administered cephalosporin antibiotic. *JAMA* 209:1331-6, 1 Sep 69
- ³⁴Weliky I, Gadebusch HH, Kripalani K, et al.: Cephradine: absorption, excretion, and tissue distribution in animals of a new cephalosporin antibiotic. *Antimicrob Agents Chemother* 5:49-54, Jan 74
- ³⁵Marshall BY: A study in general practice of cephradine in respiratory tract infections. *Curr Med Res Opin* 2:72-7, 1974
- ³⁶Limson BM, Siasoco RE, Dial FP: A new cephalosporin derivative, cephradine (TM), in the treatment of acute infective diseases. *Curr Ther Res* 14:101-6, Mar 72

1000 SQUARE FEET . . . GROUND
FLOOR OFFICE . . . THREE EXAMIN-
ING ROOMS AND CONSULTATION
ROOM.

ANGELL STREET

Reasonable Rent

331-1110

**PRIME OFFICE SPACE
FOR LEASE
PAWTUCKET
OPPOSITE MEMORIAL HOSPITAL**

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

**CALL ALLIED INVESTMENT
434-2974 or 433-0759**

PERIPATETICS

(Concluded from Page 51)

following committees: Tobacco and Cancer, Professional Nominating, and Professional Education Subcommittee on Conferences.

* *

HECTOR JASO was elected Deputy Area I Representative (Connecticut, Massachusetts, Vermont, Maine, New Hampshire, Rhode Island, Quebec, Ontario) to the Assembly of District Branches of the American Psychiatric Association, and as such will be a member of the Executive Committee of the Assembly.

The BactrimTM edge

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

A high assurance of clinical efficacy

- in cystitis, pyelonephritis and pyelitis diagnosed as chronic
- against susceptible strains of the common urinary tract pathogens, usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

Note: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in chronic and recurrent urinary tract infections.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus,

exfoliative dermatitis, anaphylactoid reactions, peri-orbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12.

Usual adult dosage: Two tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose[®] packages of 1000; Prescription Paks of 40, available singly and in trays of 10.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

BactrimTM

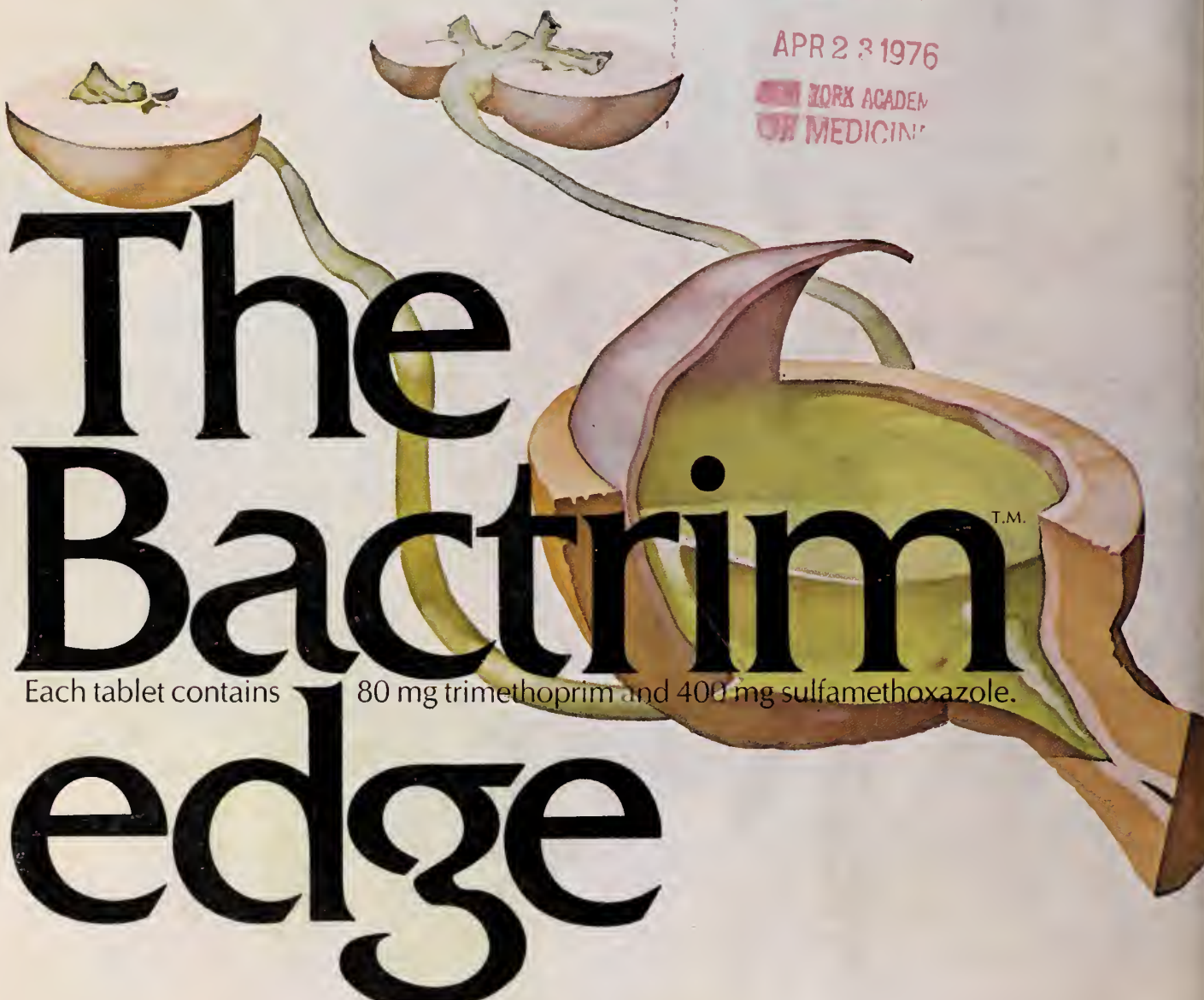
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

ROCHE

LIBRARY

APR 23 1976

NEW YORK ACADEMY
OF MEDICINE



The Bactrim^{T.M.} edge

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

A high assurance of antibacterial activity
in cystitis, pyelonephritis and pyelitis diagnosed
as chronic and due to susceptible organisms.

Before prescribing, please consult complete product information,
a summary of which appears on preceding page.

March 1975

R.I. Medical Journal

Vol. 58 No. 3

BALCONY



Special Issue Honoring Fiorindo A. Simeone, M.D.

Both after



Predominant
psychoneurotic
anxiety

Associated
depressive
symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Use with caution in addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®]
(diazepam)
2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

MARCH, 1975

Volume 58, No. 3

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.

—○—

*John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
*Stanley M. Aronson, M.D.	*Charles A. Hall, Jr., M.D.
*Bertram H. Buxton, Jr., M.D.	Robert V. Lewis, M.D.
Robert P. Davis, M.D.	*Peter L. Mathieu, M.D.
*John A. Dillon, M.D.	*Jay M. Orson, M.D.
*Herbert Fanger, M.D.	Henry T. Randall, M.D.
	*Guy A. Settignano

(*Also Member Publications Committee)

TABLE OF CONTENTS

BIOGRAPHY OF DOCTOR SIMEONE	
Robert W. Hopkins, M.D.	89
PERCUTANEOUS LONG-TERM HEPATIC ARTERY INFUSION FOR PRIMARY AND METASTATIC CANCER IN THE LIVER	
Edward G. Mansour, M.D.	91
RADIATION EFFECTS OF RADIODINE ON THE THYROID	
Brown M. Dobyns, Ph.D., M.D.	94
CLOTTING FACTORS IN BURN SEPSIS	
Richard B. Fratianne, M.D.	98
MICROCIRCULATORY DYNAMICS AND THE CONTROL OF HEMORRHAGE	
Robert W. Hopkins, M.D.	101
RESPIRATORY MONITORING OF THE CRITICALLY ILL PATIENT	
Stephen Z. Turney, M.D.	104
ENERGY METABOLISM IN SEPSIS AND TRAUMA	
George H. A. Clowes, Jr., M.D.	106
PHLEBORHEOGRAPHY	
John J. Cranley, M.D.	111
RECENT ADVANCES IN THE DIAGNOSIS AND MANAGEMENT OF RESPIRATORY DISTRESS SYNDROME	
Edward H. Karotkin, M.D. and William Oh, M.D.	131
EDITORIALS	121
MESSAGE FROM THE DEAN	71
PRESIDENT'S PAGE	73
BOOK REVIEW	134

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1975.
NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph: AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

MEDICAL EVENTS CALENDAR

Thursday, April 10, 1975

NEW ANTIBIOTICS AND INFECTIOUS DISEASES

Richard Quintiliani, M.D.

Chief, Infectious Disease, Hartford Hospital
Hartford, Connecticut

The Miriam Hospital

Sopkin Auditorium

11:00 a.m.

BIO-FEEDBACK — PRESENT STATE OF THE ART

Ben W. Feather, M.D., Ph.D.

Executive Director, Butler Hospital
Professor of Medical Sciences

Butler Hospital

Ruggles Room

4:30 p.m.-6:00 p.m.

Saturday, April 12, 1975

STAGING AS A GUIDE TO TREATMENT IN MALIGNANT LYMPHOMAS

Alan C. Aisenberg, Ph.D.

Associate Professor of Oncologic Medicine,
Harvard Medical School
Associate Physician
Massachusetts General Hospital

Rhode Island Hospital

George Build. Auditorium

10:00 a.m.

Wednesday, April 16, 1975

SURGICAL ENDODONTICS

Dr. Edwin Mehlman and

Dr. Jan Feldman

Dental Clinic Clinical Instructors
Veterans Administration Hospital

Veterans Admin. Hospital

Auditorium

9:00 a.m.-5:00 p.m.

Thursday, April 17, 1975

THE ROLE OF INTROJECTS IN PSYCHOPATHOLOGY AND PSYCHOTHERAPY

William W. Meissner, M.D.

Clinical Assistant Professor of Psychiatry
Harvard Medical School

Butler Hospital

Ruggles Room

4:30 p.m.-6:00 p.m.

Saturday, April 19, 1975

EMERGENCY TREATMENT OF BLEEDING ESOPHAGEAL VARICES

Marshall J. Orloff, M.D.

Professor and Chairman, Department of Surgery
University of California

Rhode Island Hospital

George Build. Auditorium

10:00 a.m.

Symposium on:

**NEW DEVELOPMENTS FOR THE TREATMENT OF DIABETES
MELLITUS**

J. Stuart Soeldner, M.D.

Associate Director, Elliott P. Joslin Research Lab-
oratory, Joslin Diabetes Foundation, Inc.

Associate Professor of Medicine

Harvard University Medical School

Frederick C. Goetz, M.D.

Professor of Medicine and Director, Diabetes
Clinic, Section of Endocrinology and Metabolism
University of Minnesota School of Medicine

The Miriam Hospital

Sopkin Auditorium

10:00 a.m.-12:00 noon

Wednesday, April 23, 1975

**ANATOMY AND PATHOPHYSIOLOGY OF SPINAL CORD
INJURIES**

Thomas Stewart, M.D.

Psychiatry Service

V. A. Hospital, West Roxbury, Massachusetts

Veterans Admin. Hospital

Room 1 — Auditorium

3:30 p.m.

**OFFICE EMERGENCIES AND CARDIO-PULMONARY
RESUSCITATION**

Dr. Daniel L. Nozik

Dental Clinic Clinical Instructor

Veterans Administration Hospital

Veterans Admin. Hospital

Auditorium

9:00 a.m.-5:00 p.m.

Thursday, April 24, 1975

PSYCHIATRIC ASPECTS OF SEIZURE DISORDERS

John O. Strom, M.D.

Chief of Neurology

Rhode Island Hospital

Butler Hospital

Ruggles Room

4:30 p.m.-6:00 p.m.

SECOND ANNUAL MEDICAL STUDENT RESEARCH DAY

Alumnae Hall Auditorium

Brown University

192 Meeting Street

12:30 p.m.-5:30 p.m.

Friday, April 25, 1975

**PSYCHOSOMATIC ASPECTS OF CHRONIC DISEASE IN
CHILDHOOD**

R. James McKay, Jr., M.D.

Chairman, Department of Pediatrics

University of Vermont College of Medicine

Chief, Pediatric Service

Medical Center Hospital of Vermont

Roger Wms. Gen. Hospital

Kay Auditorium

10:30 a.m.-12:00 noon

UPDATED CONCEPTS OF BUNION THERAPY

Nathaniel Gould, M.D.

Surgeon-in-Chief, Department of Orthopaedic

Surgery

Brockton Hospital

Rhode Island Hospital

George Build. Auditorium

9:00 a.m.

Saturday, April 26, 1975

**ATHEROSCLEROSIS, HYPERLIPIDEMIAS, AND PARTIAL ILEAL
BYPASS SURGERY**

Henry Buchwald, M.D.
Department of Surgery
University of Minnesota Medical School
Minneapolis, Minnesota

Rhode Island Hospital
George Bldg. Auditorium
9:00 a.m.

Thursday, May 1, 1975

**PROCESS IN PSYCHOANALYTIC PSYCHOTHERAPY:
A RESPONSE TO HANS STRUPP'S ARTICLE IN THE ARCHIVES
OF GENERAL PSYCHIATRY, January, 1975**

Paul G. Myerson, M.D.
Professor and Chairman, Department of Psychiatry
Tufts University Medical School

Butler Hospital
Ruggles Room
4:30 p.m.-6:00 p.m.

Friday, May 2, 1975

CYTOLOGY DIAGNOSTIC SEMINAR

Veterans Admin. Hospital
Auditorium
7:30 p.m.

Sunday, May 4, 1975

**THE SECOND ANNUAL BROWN UNIVERSITY MEDICAL
RECEPTION**

Atlantic City
Clinical Meetings
Haddon Hall Hotel
Parlor 609
6:00 p.m.

SPECIAL ADDENDUM

REGULARLY SCHEDULED EVENTS*

ROGER WILLIAMS GENERAL HOSPITAL

LOCATION: KAY AUDITORIUM

MONDAYS

10:00 a.m. **Pediatrics Chiefs Rounds, Roger Williams General Hospital, Kay Auditorium

FRIDAYS

10:30 a.m. Pediatric Teaching Rounds, Roger Williams General Hospital, Kay Auditorium
(once a month)

*The Schedule of Regular Events in Brown University affiliated hospitals which was published last month, omitted a few events regularly held at Roger Williams General Hospital. This special listing should be added to last months listings.

**Pediatrics Chiefs Rounds should be at 10:00 a.m. instead of 10:30 a.m.

SPECIAL ADDENDUM

REGULARLY SCHEDULED EVENTS*

THE MEMORIAL HOSPITAL

LOCATION: RICHARDSON AUDITORIUM

MONDAYS

12:00 noon	Renal Conference, (1st and 3rd week) Dr. S. Garella and Staff
12:00 noon	Pulmonary Conference, (2nd week) Drs. R. Redding and M. Kahn
12:00 noon	Cardiology Conference, (4th week) Drs. E. Lovering, A. Kahn and others
1:00 p.m.	Immunology and Oncology Conference, (2nd and 4th week) Drs. Z. Zawadzki and S. Kaplan
3:00 p.m.	Infectious Disease Conference, (1st week) Drs. F. Roland, M. Madhoff, R. Gleckman, S. Zinner and B. Aronson

TUESDAYS

12:00 noon	Dermatology Conference, (1st week) Dr. B. Schiff and Staff
12:00 noon	Hematology Conference (2nd week) Dr. M. Steiner
12:00 noon	Hematology Conference, (3rd week) Dr. M. G. Baldini
12:00 noon	Seminar in Basic Hematology (4th week) Guest Speaker
2:30 p.m.	Endocrinology Conference, (1st week) Drs. M. Mitchell and A. Vagenakis
2:30 p.m.	EKG Conference and Cardiology Ward Rounds (2nd; 3rd; 4th and 5th week) Dr. D. Kitzes

WEDNESDAYS

10:00 a.m.	Medical Grand Rounds (weekly)
1:00 p.m.	Pulmonary Conference, (1st and 3rd week) Drs. R. Redding and M. Kahn
2:00 p.m.	X-ray Conference, (2nd and 4th week) Dr. Hallmann and Staff

THURSDAYS

12:00 noon	Medical Ophthalmology (1st week) Dr. G. Noble
12:00 noon	Endocrinology Conference, (3rd week) Dr. M. Mitchell
1:00 p.m.	X-ray Conference, (5th week) Dr. Hallmann and Staff
2:00 p.m.	Pathology Conference, (2nd and 4th week) Dr. T. Micholonghi and Staff
3:00 p.m.	Neuropathology Conference, (1st week) Department Pathology Staff
4:00 p.m.	Journal Club (Wood 4) (weekly)

FRIDAYS

11:00 a.m.	Internal Medicine Rounds (2nd and 4th week) Dr. R. McCombs
12:00 noon	Psychiatric Seminar (1st week) Dr. R. Gavalya
12:00 noon	Infectious Disease Conference, (3rd week) Drs. F. Roland, M. Madhoff, R. Gleckman, S. Zinner and B. Aronson
12:00 noon	Mortality Conference, (4th week) Dr. J. Kurtis
4:00 p.m.	Physician-in-Chief's Conference (Dept. of Med. Conf. Room) (3rd week) Dr. M. G. Baldini

SATURDAYS

11:00 a.m.	Neurology Conference, (1st and 3rd week) Dr. J. Sullivan and Staff
------------	--

*The Schedule of Regular Events in Brown University affiliated hospitals which was published last month omitted a number of events regularly held at The Memorial Hospital. This special listing should be added to last months listings.



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

INTERNSHIPS OBTAINED BY BROWN UNIVERSITY MEDICAL STUDENTS, CLASS OF 1975

The senior medical students of Brown University, together with seniors from 113 other medical schools, have recently participated in a nationwide matching program by which internships are chosen. The process of placing the approximately 14,000 medical graduates into the nation's internships is both complicated and highly competitive. A computerized program coordinates the choices of both candidate and hospital and matches them against one another. The more desirable hospital posts, therefore, are oversubscribed (often a ratio of 100 applicants per vacancy) while other internships are not sought after at all.

The results of the national matching program were revealed on March 5, and the Brown University senior medical class, consisting of 58 students, obtained the following internships for the year beginning July 1, 1975:

Rhode Island (45% of the Class)

Brown University Affiliated Hospitals	13
Rhode Island Hospital	7
Roger Williams General Hospital	5
The Miriam Hospital	1
Memorial Hospital	1

Massachusetts (9% of the Class)

Harvard University Hospitals	1
Massachusetts General Hospital	1
Children's Center	1
Boston University Hospitals	1
Boston City Hospital	1
University Hospital	1
Tufts University Hospitals	1
St. Elizabeth's Hospital	1

Connecticut (3% of the Class)

Yale University Hospitals	1
Yale-New Haven Hospital	1
University of Connecticut Hospitals	1
University Hospital	1

New York (16% of the Class)

Mt. Sinai School of Medicine Hospitals	1
Mt. Sinai Hospital	1

Einstein College of Medicine Hospitals	2
Montefiore Hospital	1
Columbia University Hospitals	1
St. Luke's Hospital	1
Roosevelt Hospital	1
Cornell University Hospitals	1
New York Hospital	1
Rochester University Hospitals	1
University of Rochester Hospital	1
Rochester General Hospital	2

Middle Atlantic and South (9% of the Class)

Virginia Commonwealth University Hospitals	1
Medical College of Virginia	1
Georgetown-George Washington University Hospitals	1
Washington Hospital Center	1
Johns Hopkins University Hospitals	1
Johns Hopkins Hospital	1
University of Pennsylvania Hospitals	1
Philadelphia General Hospital	1
Medical College of South Carolina Hospitals	1
Spartanburg Hospital	1

Mid-West (9% of the Class)

University of Chicago Hospitals	1
University Hospital	1
Rush Medical College Hospital	2
Presbyterian-St. Lukes Hospital	1
University of South Dakota Hospitals	1
Sioux Falls Program	1
Wisconsin University Hospitals	1
University Hospital	1

Far West (7% of the Class)

Stanford University Hospital	1
University Hospital	1
University of Southern California	3
Los Angeles County Hospital	3

Military (3% of the Class)

Portsmouth Naval Hospital (Virginia)	1
Travis AFB Medical Center (California)	1

Two facts emerge from this roster of internship assignments: *Firstly*, that our inaugural medical class did exceedingly well in being selected by some of the finest (and most sought after) institutions. Indeed, everyone of the civilian internships obtained by our students was in a University-affili-

(Continued on next page)

ated hospital. *Secondly*, that 26 of the 58 seniors (45%) have elected to begin their graduate medical education in the State of Rhode Island. Experience has shown that the geographic site of internship and residency is the single most important factor

in determining a physician's ultimate choice of professional location. It is likely, then, that Brown's medical school will be the major source of Rhode Island's future cadre of practicing physicians.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs
Brown University



Plan Now To Attend

**164th ANNUAL SCIENTIFIC
ASSEMBLY**
of the
Rhode Island Medical Society

WEDNESDAY, APRIL 16, 1975

CHATEAU DeVILLE
Warwick, Rhode Island

BUSINESS SESSION: 1:30 P.M. (Versailles Suite)
CHAPIN ORATION: 4:00 P.M. (Versailles Suite)

RECEPTION: 6:00 P.M. (Regency Suite)
DINNER: 7:00 P.M. (Regency Suite)

Reservations Close Tuesday, April 15, 1975
Call 331-3207

President's Page

Statement of Nathan Chaset, M.D., President Of The Rhode Island Medical Society At The Hearing Before the Insurance Commissioner On March 21, 1975

I thank you for allowing me to speak before you today on some problems confronting the medical profession.

I am Nathan Chaset, M.D., a Urologic Surgeon in private practice in Providence, R. I. I am a past President of the Providence Medical Association. I am at present the President of the Rhode Island Medical Society, and I am President-elect of the New England Section of the American Urological Association. I am a member of the American Medical Association, a Fellow of the American College of Surgeons, a Diplomate of the American Board of Urology, and a member of the Association of Clinical Urologists. I am assistant Clinical Professor of Urology in the Brown University Medical School. I have been Chairman of the Mediation Committee of the Rhode Island Medical Society for many years and have investigated complaints against doctors which have been brought before that committee. I have been very active in these matters and have had the privilege of working closely with the attorneys representing insurance companies. They can attest to my efforts and close cooperation with them. During all this time I have managed to carry on a very active urologic practice and have served as Chief of Urology in several hospitals, and I still actively serve my hospitals and my community.

We are here today basically to consider three important aspects of Medical Liability Insurance. First and perhaps of less importance is the increase in premiums asked by the insurance companies. The second and more important is the "claims-made" form coverage proposed by St. Paul Insurance Company. The third, and to me the most important of all is that we all work together to make absolutely certain that we maintain a market in this type of insurance and that the market shall be one with which we can all live.

As for the increase in premiums, I must state that I am not in any position to evaluate the

need for such an increase either for 5 per cent or 50 per cent or 150 per cent. You gentlemen here can and most certainly will evaluate the actuarial statistics and come forth with the correct estimate, and you will decide judiciously and equitably just what is needed.

Government statistics seem to show that of the billions of dollars received by the insurance industry in fire and casualty underwriting, only three tenths of one per cent represents health care professional liability insurance. However, it seems fair to say that, on a cost-plus basis, professional liability insurance at present adds up to a poor business proposition.

Other statistics seem to show that injured patients receive only 27 cents of the award dollar as their share. This indeed indicates that our present system of compensating injury is a wasteful anachronism.

An insurance company bases its rate-setting requests on what it determines as its expected loss figures, and this directly reflects whether the physicians' premiums will go up or down. In my professional lifetime, I have never witnessed a reduction.

We do expect that this Commission will carefully scrutinize the loss development and trending statistics and will certify or deny them and will come forward with rate-setting based on this certification or denial.

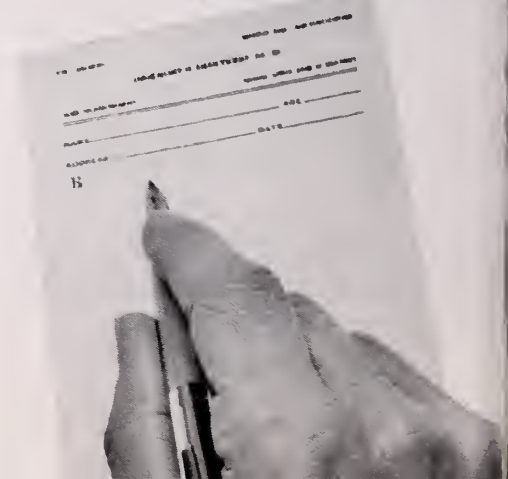
We bow to your judgment, and we now accept whatever decision you make.

I will now discuss the "claims-made" type of insurance. Certainly I have no experience with this type of insurance. I look upon it as an experiment, and, as such, I do not see much objection. I carry fire insurance, automobile insurance, term insurance, and home-owners insurance, plus other forms of liability insurance, and I feel they all fall into a like category. My Blue Cross and Blue Shield policies are also of a similar nature.

(Continued on page 76)



Bioequivalence



The weight of scientific opinion:

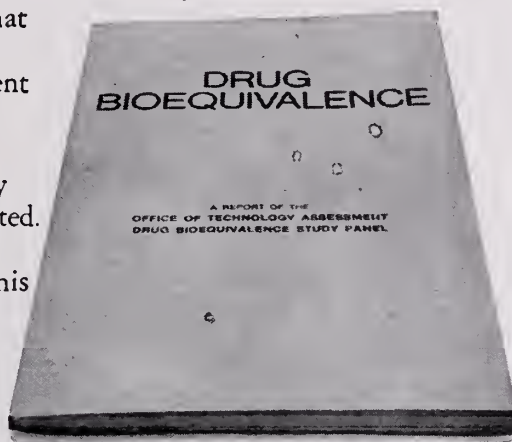
If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that drug's safety and effectiveness only because the chemical content is the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalence in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented inequivalences constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Protecting the integrity of your prescription

PRESIDENT'S PAGE

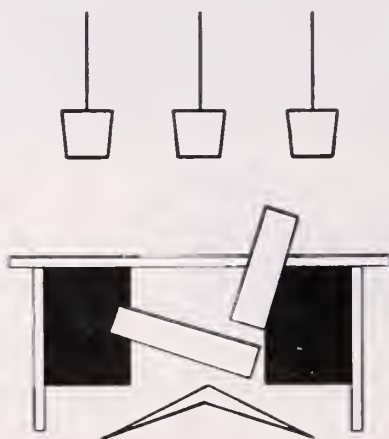
(Continued from page 73)

My greatest fear is that the insurance companies may soon find their experiment is not working the way they had planned and will summarily drop the coverage and leave our doctors without the liability insurance. I can also visualize the possibility of a physician having a claim against him and then having the insurance company refuse to insure him for the next year. The St. Paul Insurance Company guarantees in its "claims-made" policy that a physician will be able to purchase protection after he has either RETIRED or TRANSFERRED to another insurance program. It does not in any way guarantee that a physician will be able to buy a "claims-made" policy year after year UNTIL he retires or transfers. To me this is a grievous fault. I strongly urge the "claims-made" policy with the premiums renegotiated on a year to year basis if and when indicated. The Rhode Island Medical Society will assist in every way possible to reach an agreement in these cases. I suggest we consider a guaranteed renewable type of policy with the renewal guaranteed for at least 3 years. The Company must then be required to give at least 6 months' notice of its intention to terminate, unless circumstances demand other action.

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) GAspee 1-5228

I also feel we must know at the end of any year exactly how we fared. There is little need under the "claims-made" policy for unallocated reserves or allocated reserves beyond the date of the expiration of the claims year so that, at the end of any fiscal year, we should have a true picture of the status of our insurance. I do not by any stretch of the imagination expect that we will get refunds. I do expect that a good fiscal experience should influence the premium rates for the ensuing year.

We have all heard repeatedly the expression "malpractice crisis". We have heard over and over again the accusations of lawyers against doctors and doctors against lawyers, and the patients against lawyers and doctors, and all of these against insurance companies. No one can pinpoint the real culprit. The crisis has existed for a long time. Only recently have we been hanging over the precipice or under the sword of Damocles, whichever you prefer. The one preeminent concept is that now we need to exert all our expertise and all our energies to help solve this unfortunate dilemma. This is the third and most important part of my presentation.

I will not discuss all the so-called "facts" with which you are very well acquainted. I do not intend to give you a rhetorical rehash of all the programs, plans and suggestions set forth in great volume in all the media as solutions for this unfortunate situation. We need to explore all approaches to our mutual problems and endeavor to find a new forum which is fair, just and expedient for the resolution of professional liability disputes.

All of you associated with the insurance companies know full well how earnestly and fully the Rhode Island Medical Society has cooperated with you in helping your attorneys and your claims investigators. We will continue to do so and we will constantly search for ways to help further. Our powers, however, are greatly limited. We do not have any power of licensure nor of recertification. We do have some control over the physicians who belong to the Rhode Island Medical Society, but we do not have any investigative or punitive functions in regard to those physicians who are not members. The insurance companies can be of immense help in this area if they insist that all of their insured doctors must be members of our Society to qualify for a basic premium rate. We can then more accurately identify the "poor risk" doctor, and we can intensify our ef-

forts to convert him (or her) to a "good risk" where possible. Programs, if they are to work, must be 100 per cent. We cannot afford anything less than total commitment from 100 per cent of our doctors. The Rhode Island Medical Society can be most effective in this type of setting.

We need the authority to revoke, suspend or otherwise restrict the license of a physician deemed to be unfit to practice medicine for any reason other than being a sick or disabled doctor.

The insurance companies must be the ones to provide us with the facts and the names of the "poor risk" doctors as they know them. We in the Medical Society must reciprocate by uncovering these individuals and informing the carriers, and also do our utmost to reeducate, reform, or rehabilitate these offenders. The total number of doctors sued for malpractice is small. The vast majority of doctors have never been sued or even threatened with a suit. With total cooperation we should be able to uncover the bad apples in the barrel.

Perhaps the single most important aspect of our mutual problems is with our legislature. We must work together, and we must work expeditiously to obtain legislative changes in the following areas:

1. Rectify the statute of limitations.
2. Place a ceiling on damages.
3. Establish a sliding scale for contingency fees.
4. Limit or eliminate "pain and suffering" and punitive damages as items for monetary damages.
5. Eliminate injury alone as a basis of negligence (*res ipsa loquitur*).
6. Limit guarantee of medical results to assurances in writing and not allow oral statements to qualify the terms of written informed consent.
7. Eliminate the "ad damnum" clause in law suits.

In long range planning the insurance companies should join with us in fostering compulsory and binding arbitration and to have damages fixed by an impartial board similar in concept to workmen's compensation-type programs or, in other words, a Medical Injury Compensation Board.

The Rhode Island Medical Society does not have the manpower, the financial resources, or the legal expertise to effect the changes I have outlined. All insurance companies writing medical liability insurance should join forces with us, with the State Department of Health, with Blue Cross and Blue Shield, with the Bar Association, and with representative consumer groups to evolve

a workable plan which must guarantee fair compensation for those injured in medical accidents, weed out spurious claims, eliminate the costly adversary system and identify physicians who are not performing.

We need insurance protection in order to continue in the practice of medicine or surgery. We are willing to pay the premiums necessary to keep our insurers in the medical liability business. We need further assurances that our policies will continue in force for a reasonable length of time. We need the backing of the insurance companies to help us to supervise and assist in pinpointing and upgrading all the doctors classified as "poor risk," and to do this we need to be able to have 100 per cent of Rhode Island doctors as members of our State Medical Society.

Constantly escalating premiums and converting to "claims-made" policies do not solve our problems. These are stop-gap expediences which merely postpones an eventual proper solution. As in an iceberg, the remaining seven-eighths of the problem is as yet not visible. We must cooperate fully in every way possible to alleviate the situation now present which acts inevitably to the marked detriment of our patients.



FOR SALE

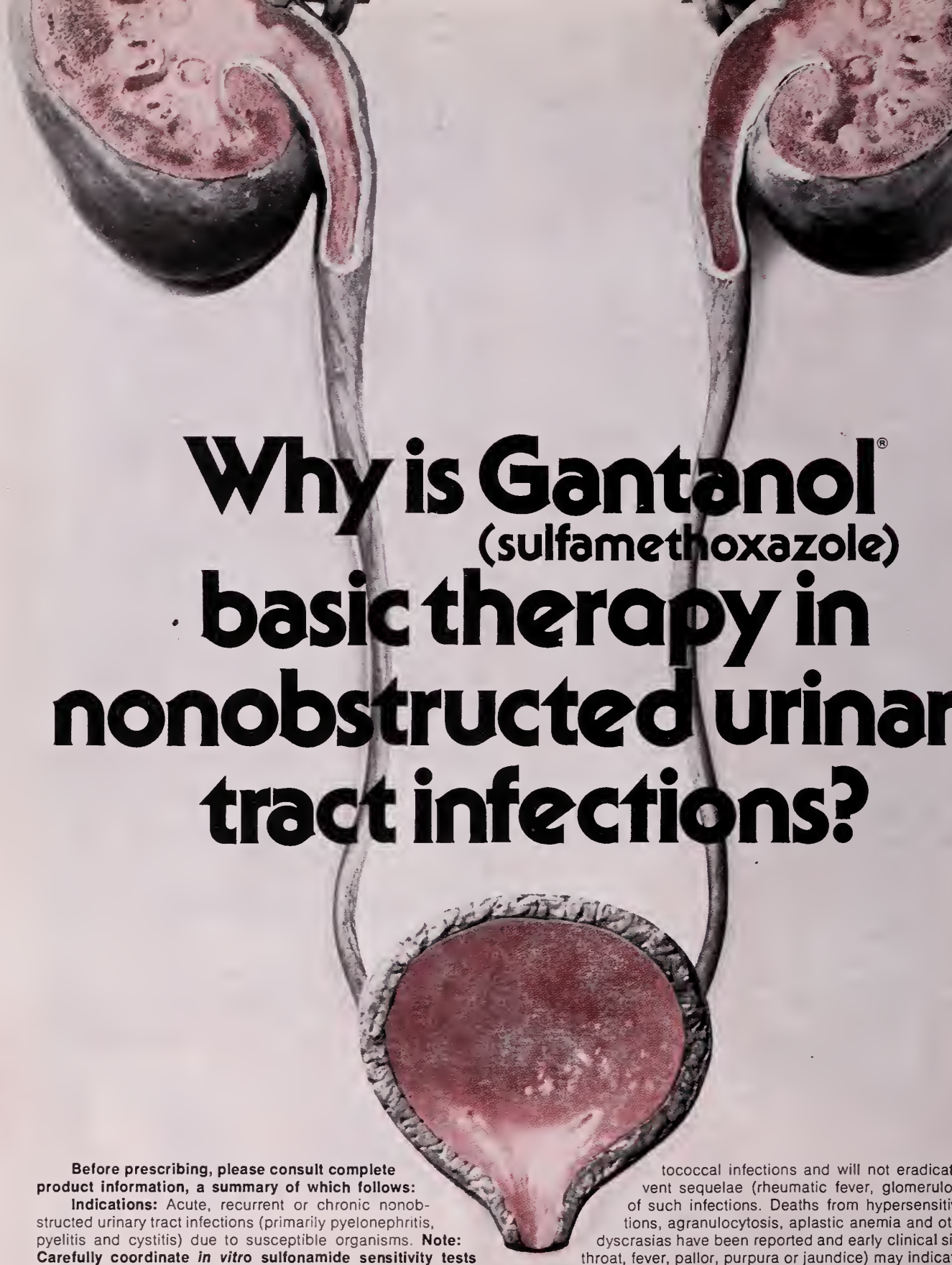
EAST GREENWICH

GRACIOUS COLONIAL ESTATE

5 Bedrooms, 4½ Baths, 3 Fireplaces, Heated Inground Pool, 3 Car Garage, Circular Driveway. Extras.

W. HENRY
coleman
REALTORS

884-5522



Why is Gantanol[®] (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic strep-

tococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (fever, throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom drug-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, ir-

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli*, *Klebsiella-Aerobacter*, *Staph. aureus*, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy **Gantanol**[®] (sulfamethoxazole) Tablets/Suspension (0.5 Gm) (0.5 Gm/teasp.)

ira, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.

**TASCA
ABC
PLAN**





Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed. "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."^{1*}

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

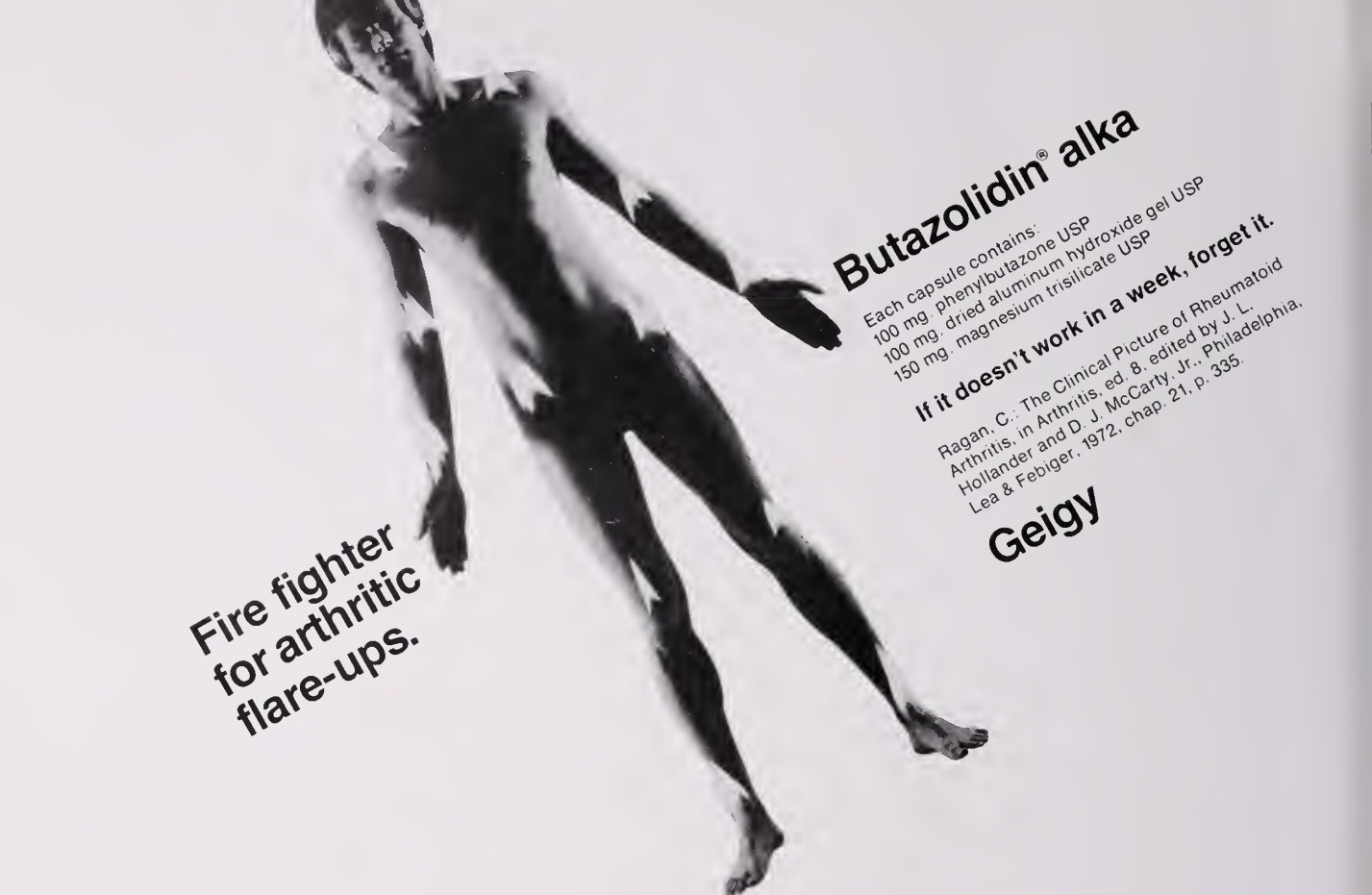
Each capsule contains:

100 mg. phenylbutazone USP

100 mg. dried aluminum hydroxide gel USP

150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



**Fire fighter
for arthritic
flare-ups.**

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in *Arthritis*, ed. 8, edited by J. L. Hollander and D. J. McCarthy, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpre-

dictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dys-

pepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

A New Look in Hotline Service. Three Lines – One Number.

274-4848

We've changed our telephone system to provide better service for you.



Blue Shield of Rhode Island, 444 Westminster Mall, Providence, R. I. 02901

Isaac Ray Symposium

HUMAN RIGHTS, THE LAW, AND PSYCHIATRIC TREATMENT

MAY 24-23, 1975

Speakers will include

THE HONORABLE DAVID L. BAZELON
Chief Judge, U. S. District Court of Appeals for the
District of Columbia Circuit
"Is the Adversary Process Essential to Due Process in
Psychiatry?"

ALAN M. DERSHOWITZ, LL.B.
Professor of Law, Harvard Law School
"Dangerousness as a Criterion for Confinement"

BRUCE J. ENNIS, J.D.
Director, Civil Liberties and Mental Illness Project,
New York Civil Liberties Union
"Emerging Legal Rights for the Mentally Handicapped"

A. LOUIS MCGARRY, M.D.
Director of Legal Medicine, Massachusetts Department
of Mental Health
"The Empirical Approach: The Voice of the Supreme
Court"

JACQUES QUEN, M.D.
Clinical Professor, Cornell University Medical Center
"Isaac Ray: Have We Learned His Lessons?"

JONAS R. RAPPEPORT, M.D.
Chief Medical Officer, Supreme Bench of Baltimore
"Enforced Treatment — Is It Treatment?"

ALAN A. STONE, M.D.
Professor of Law and Psychiatry, Harvard University
Faculty of Law and Faculty of Medicine
"The Right to Treatment and the Medical Establishment"

THE HONORABLE JOSEPH R. WEISBERGER
Presiding Justice of the R. I. Superior Court
Panelist and Discussant

Butler Hospital, 333 Grotto Avenue, Providence, Rhode Island
(A Brown University Teaching Hospital)
In affiliation with the R. I. District Branch,
American Psychiatric Association
and the R. I. Bar Association

Registration Fee — \$25.00

Student Scholarships Available

Advance registration required. Send name, address and check to:
Isaac Ray Symposium, Butler Hospital, 333 Grotto Avenue, Providence, Rhode Island 02906.
Deadline May 1, 1974. Make checks payable to Butler Hospital — Isaac Ray Symposium.

We have a specialty too. Office interiors.



ROITMAN & SON, INC.

Fine Furniture and Accessories

161 South Main Street,
Providence, Rhode Island 02903
Telephone (401) 861-6010

Open Monday and Thursday evenings until 9.
Convenient terms • Free parking
Delivery arranged beyond local area.

We plan and furnish professional offices of any size, from the carpet up. Our professional interior designers work with you or with your architect.

Our people are not only highly talented, they are experienced.

Furnishing your office can be one thing you don't have to worry about. Just call us. 861-6010.



**We deal
exclusively
in the investment
opportunities
of tax free
state and
municipal
bonds.**



CAROLAN & CO. INC.
2401 HOSPITAL TRUST TOWER
PROVIDENCE, R. I. 02903 (401) 331-1932

**Introducing
NUVEEN
TAX-EXEMPT
BOND FUND
Check-a-Month Plan
Series 60**

The coupon below will bring information on how to obtain income which is entirely exempt from Federal income taxes, in the opinion of counsel. This new series consists of 200,000 units—each of which offers you a share in a \$20,000,000 par value portfolio of professionally selected municipal bonds. The Fund's chief objectives are conservation of capital and tax-free return. Participants receive a monthly check for their proportionate share of the tax-free interest. For a free prospectus, call or write your nearest Nuveen office or:

WAYNE E. CROSS

1349 West Shore Road, Warwick, R. I.—738-4574
representing

INVESTORS DIVERSIFIED SERVICES

Please send me information of the Nuveen
Check-a-Month Plan.

Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____

**NUVEEN
TAX-EXEMPT
BOND FUND**



Copies of the Prospectus may be obtained in any State only from a dealer which may offer the units in such State.

The Pain Phone

When a telephone prescription for pain relief is necessary or convenient, you can call in your order for Empirin Compound with Codeine in 45 of the 50 states† That includes No. 4, which provides a full grain of codeine for more intense, acute pain.

† The exceptions:
Alaska, Arizona, Maine,
Oregon, Rhode Island, and
the District of Columbia.

EMPIRIN[®] COMPOUND c CODEINE

No. 4 codeine phosphate*
(64.8 mg) gr 1

No. 3 codeine phosphate*
(32.4 mg) gr ½

Each tablet also contains aspirin
gr 3½, phenacetin gr 2½,
caffeine gr ½.

* Warning—may be habit-forming.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Hopkins

Profile "20"

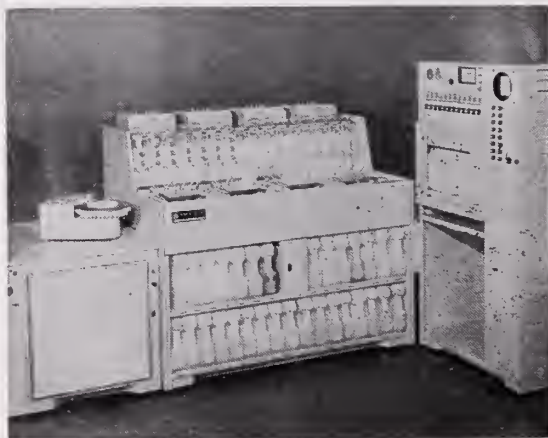
Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES

\$15.00



Hopkins Medical Laboratory

335 BROADWAY

PROVIDENCE, R. I. 02909

TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.

DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law: diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nelorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Use in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE

Searle & Co.

San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

454 R

When diarrhea has his number...



Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea

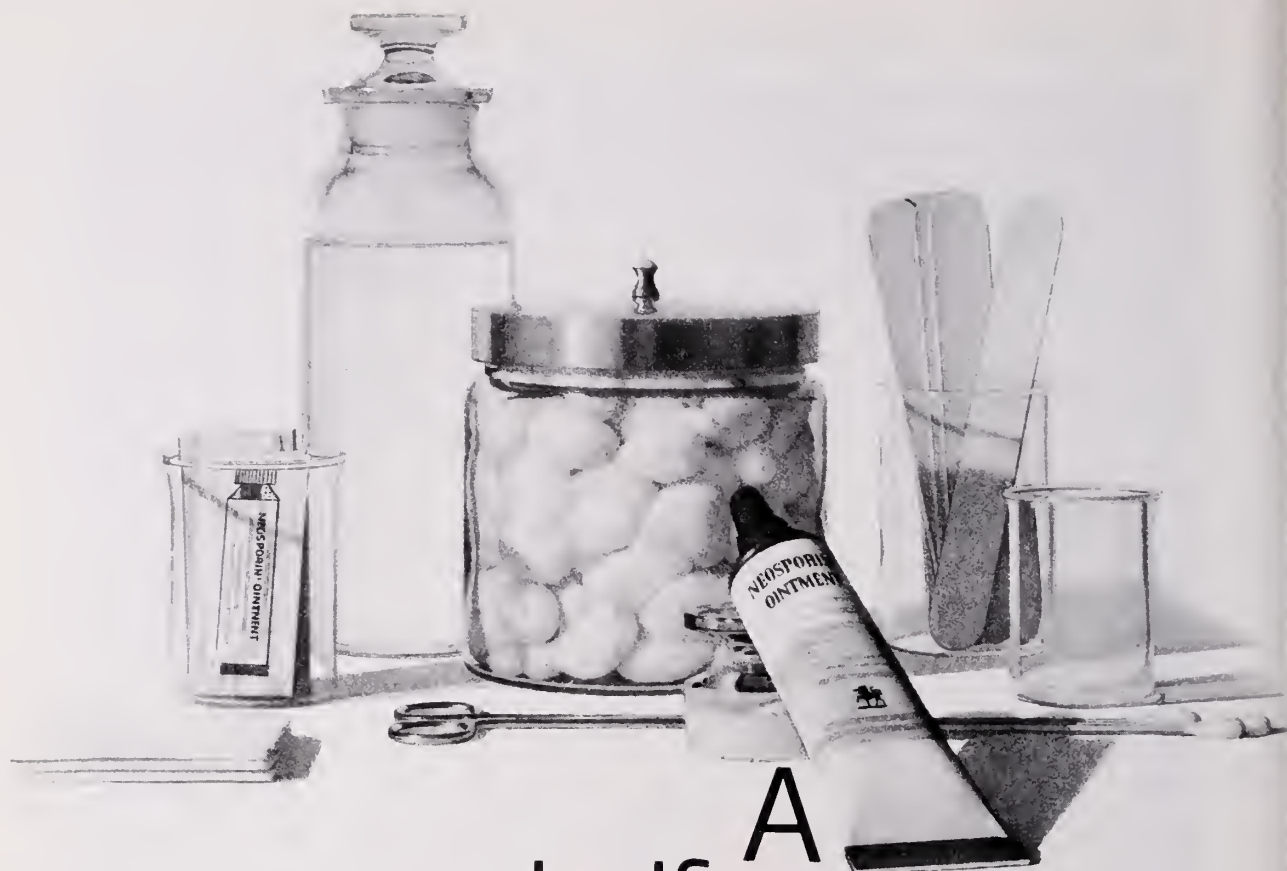
and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil[®]
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride 2.5 mg.
(Warning: May be habit forming)
atropine sulfate 0.025 mg.

Usually stops diarrhea promptly.



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started.

In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare.

Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced.

Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment (polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where

absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Department.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, sterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH **DYAZIDE**[®]

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.

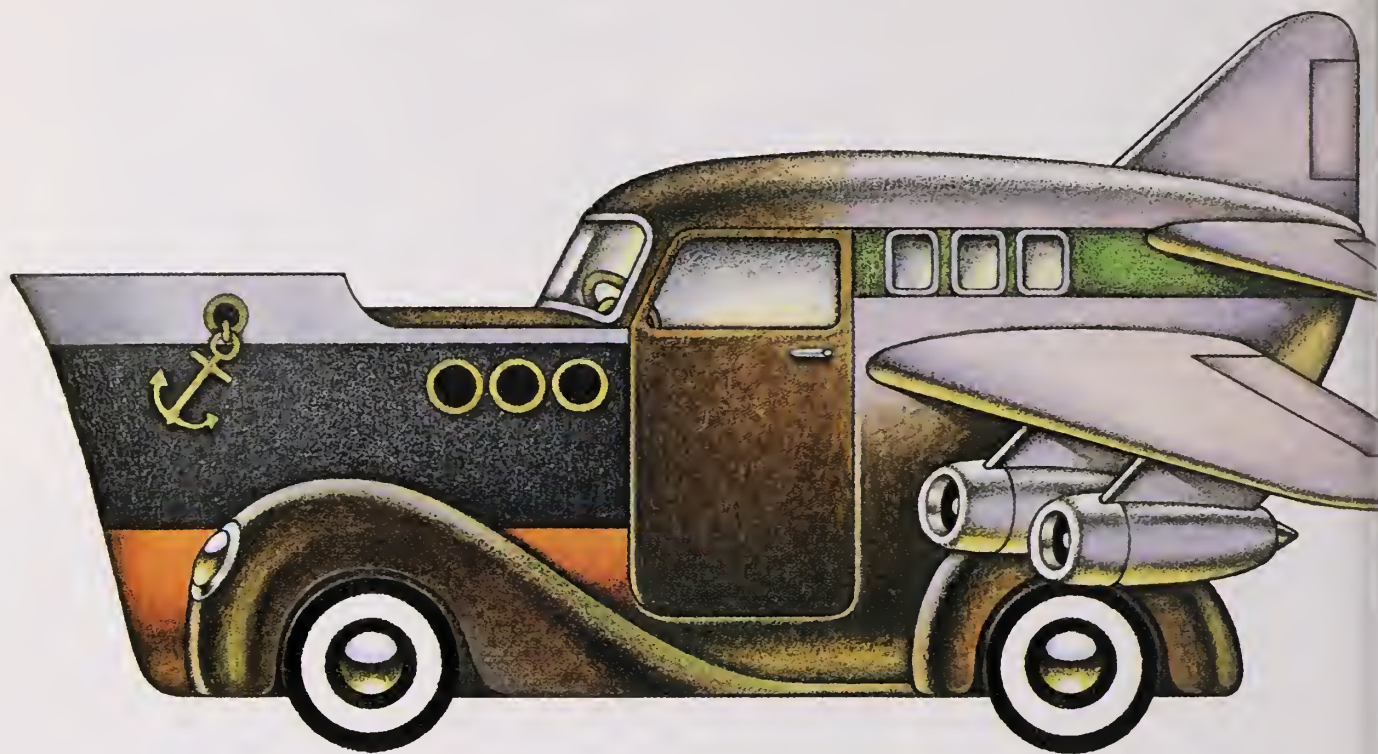
Trademark

Neither inconvenient potassium supplements
nor special K⁺ rich diets needed as a rule.
Just 'Dyazide' once or twice daily for maintenance.



Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP



On land, sea, and in the air...

Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.

Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did

not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 
 A division of Pfizer Pharmaceuticals
 New York, New York 10017

Antivert®/25 Chewable Tablets
(meclizine HCl) 25 mg.
for motion sickness

NOTICE

MEMBERS OF A.C.S.
MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY
215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue
Cranston, R. I. 02920
(401) 943-1884



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



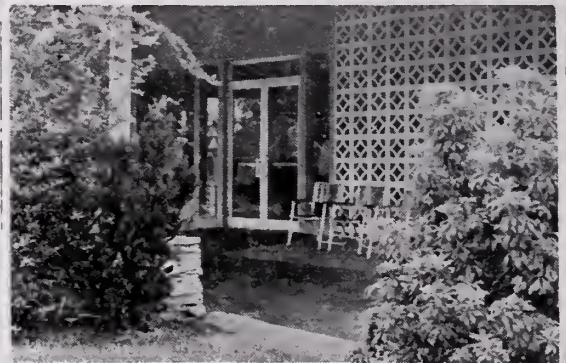
Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

559-9

HEALTH HAVENS

**A SKILLED NURSING HOME
MEDICARE PARTICIPATING**



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence

Tel. 438-4275

JCAH Accredited

POOLS BY AQUA FUN

**BUILDERS IN THE ART OF
CUSTOM POOLS**

Specializing In

**ONE PIECE FIBERGLASS POOLS —
NO SEAMS**

WITH SELF CLEANING POOL SYSTEMS

FREE FORMS —

DESIGN YOUR OWN POOL

VISIT OUR INDOOR DISPLAY POOL

384 Atwood Ave., Rt. 5

Cranston, R.I.

Tel.: 944-2010

"Gentlemen, congratulations are in order."



"A.H. Robins asked me to compare the banana flavor of their Donnagel®-PG with the real thing and, my love, I couldn't tell the difference. Not even in sip-by-sip comparison. Amazing!"

"There's no unpleasant paregoric taste because there's no paregoric. Clever, wouldn't you say? Instead, A. H. Robins uses the therapeutic equivalent, powdered opium, to promote the production of formed

stools and lessen the urge. And Donnagel-PG also provides the demulcent-detoxinant effects of kaolin and pectin, plus the antispasmodic benefits of belladonna alkaloids.

"But what I find most impressive is the skillful manner in which A. H. Robins has combined these ingredients with that delicate flavor of vintage bananas. Smashing, absolutely smashing!"

"May I propose a toast?"

Donnagel-PG. ©

Donnagel with paregoric equivalent

Each 30 cc. contains:

Kaolin	6.0g
Pectin	142.8mg
Hyoscyamine sulfate	0.1037 mg
Atropine sulfate	0.0194 mg
Hyoscine hydrobromide	0.0065 mg
Powdered opium, USP	24.0 mg.

(equivalent to paregoric 6 ml.)
(warning: may be habit forming)

Sodium benzoate 60.0 mg.
(preservative)

Alcohol, 5%

© Available on oral prescription or without prescription
in compliance with applicable state and local law.

A-H-ROBINS

A. H. Robins Company, Richmond, Virginia 23220



IN COUGHS
OF COLDS,
FLU, AND U.R.I.
CLEAR
THE
TRACT
WITH THE
ROBITUSSIN[®]
LINE

Fall and winter coughs are back. Time to help clear the lower respiratory tract with the five Robitussins and Cough Calmers. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheo-bronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For unproductive coughs

ROBITUSSIN[®]

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Alcohol, 3.5%

For severe coughs

ROBITUSSIN A-C[®]

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Codeine phosphate 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

ROBITUSSIN-DM[®]

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Dextromethorphan hydrobromide 15 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS[®]

Each Cough Calmer contains:
Glyceryl guaiacolate 50 mg.
Dextromethorphan hydrobromide 7.5 mg.

Clears nasal and sinus passages as it relieves coughs

ROBITUSSIN-PE[®]

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Phenylephrine hydrochloride 10 mg.
Alcohol, 1.4%

MEET THE NEWEST MEMBER OF THE LINE

Comprehensive decongestant action helps control cough and clear stuffy nose and sinuses. Non-narcotic.

ROBITUSSIN[®]-CF

Each 5 cc. contains:
Glyceryl guaiacolate 50 mg.
Dextromethorphan hydrobromide 10.0 mg.
Phenylpropanolamine hydrochloride 12.5 mg.
Alcohol, 1.4%

Select the Robitussin [®] formulation that treats your patient's individual coughing needs:	Expectorant-Demulcent	Cough Suppressant	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN [®]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ROBITUSSIN A-C [®]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ROBITUSSIN-DM [®]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ROBITUSSIN-PE [®]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ROBITUSSIN [®] -CF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
COUGH CALMERS [®]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



FIORINDO A. SIMEONE, M.D.

FIORINDO A. SIMEONE, M.D.

In July, 1974 Dr. Fiorindo A. Simeone joined the ranks of the emeriti at Brown University. Although to many this signifies retirement, for Simeone it means the opportunity to take on a few additional jobs while most of the old ones refuse to disappear. The faculty of the Section of Surgery of the Brown University Program in Medicine thought it fitting to mark the event with a symposium and a dinner, jointly sponsored by the Medical Staff of The Miriam Hospital. The papers presented at the symposium by old colleagues and students constitute this Festschrift in honor of Doctor Simeone.

Arriving in the United States as a small child, he spent most of his first score of years in academic pursuits in Providence, both as a student and as an educator. He established firm roots in the community, attending public schools and Brown University, from which he received the A.B. and Sc.M. degrees in 1929 and 1930 respectively. From 1928-30 he served for the first time on Brown University's faculty as a Demonstrator in Biology.

The next two decades were spent in the Harvard community as a medical student, as a researcher with Dr. Walter B. Cannon, as a house pupil at Massachusetts General Hospital and the Peter Bent Brigham Hospital, and as a member of the faculty of the Harvard Medical School. During World War II he served as a Consultant in Surgery, chiefly in the African and Mediterranean theaters. The management of severely injured patients, a major and persistent civilian as well as military problem, was immeasurably improved as a result of studies of battle casualties made by Doctor Simeone and others of the Harvard Surgical Unit.

Returning to Harvard and the Massachusetts General Hospital after the war, Doctor Simeone established the first physiologically-based and clinically-oriented peripheral vascular laboratory. Among the early Fellows working with Doctor Simeone and Dr. Robert Linton in the laboratory, was Dr. John Joseph (Jack) Cranley, Jr. Doctor Cranley has since become a leading vascular surgeon, author of important texts on vascular disease, and Director of the Department of Surgery at the Good Samaritan Hospital in Cincinnati.

In 1950 Doctor Simeone accepted an invitation to become Professor of Surgery at Western Reserve University and the first full-time Director of the Department of Surgery at the City Hospital

(now the Cleveland Metropolitan General Hospital). There, he played a major role in the development of the widely admired and often imitated "new curriculum" of Western Reserve University School of Medicine. His researches on the control of the circulation and the physiology of shock contributed significantly to the understanding of problems in these areas.

His first two associates in Cleveland were Dr. Brown M. Dobyns and Dr. George H. A. Clowes. Also coming from Massachusetts General Hospital, where he had worked with Drs. Oliver Cope and James Howard Means, Doctor Dobyns has continued extensive studies of the thyroid gland, especially of the effects of radiation. He is currently Professor of Surgery at Case Western Reserve University and Associate Director of the Department of Surgery at the Metropolitan General Hospital. Doctor Clowes, a noted mariner, was prompted (I am told) by a discussion with Doctor Simeone of fish and gills to develop the first membrane oxygenator. Its descendants are currently under intensive study at Brown and elsewhere for long-term oxygenation of patients with acute respiratory insufficiency. Doctor Clowes began his extensive studies of critically ill patients at the Metropolitan General Hospital and has continued them at the Medical College of South Carolina, where he is now Clinical Professor of Surgery. His latest faculty appointment has been as Lecturer in Surgery at Brown University. Also joining Doctor Simeone's faculty at the Cleveland Metropolitan General Hospital and Western Reserve University in 1958, was Dr. Robert W. Hopkins, who continues the study of shock and dynamics of blood flow after following Doctor Simeone to Brown.

The three remaining participants in the Symposium were Doctor Simeone's residents at the Cleveland Metropolitan General Hospital. Dr. Richard B. Fratianne has remained at the Metropolitan General Hospital, where he is Director of the Burn Unit and Associate Professor of Surgery at Case Western Reserve University. Dr. Steven Z. Turney moved to the University of Maryland, where he is Associate Professor of Cardiovascular Surgery and an expert in the techniques of monitoring the critically ill. Dr. Edward G. Mansour also remained at the Metropolitan General Hospital, where he is Director of Sur-

(Continued on page 134)

Kefzol[®] cefazolin sodium

Ampoules, equivalent to 1 Gm. of cefazolin



*Additional information available
to the profession on request.*

Eli Lilly and Company
Indianapolis, Indiana 46206
400380

Percutaneous Long-Term Hepatic Artery Infusion For Primary And Metastatic Cancer In The Liver

Method Is Useful Where Initial Operative Placement Is Not Possible Or Where Patient Refuses Surgery

By Edward G. Mansour, M.D.

Primary and metastatic malignancy involving the liver is a continuing problem for surgeons and other physicians who manage patients with cancer. Recent interest in the treatment of hepatic metastases has accounted for numerous articles in the literature which detail the results of two therapeutic approaches, surgical resection and infusion chemotherapy. Most radio therapists are reluctant to treat the liver for metastatic malignant disease. The use of an intraarterial catheter for the administration of cancer chemotherapeutic agents was introduced in 1950 by Klopp and associates, when fractionated doses of nitrogen mustard were given over a six to fifteen day period.⁹ Patients suffering from cancer metastatic to the liver usually die within two months to a year from the time of diagnosis.^{2, 5, 8} The factors adversely affecting survival were weight loss, intestinal symptoms, ascites, peritoneal seeding, extension of the primary carcinoma to other viscera, histologic involvement of lymph nodes or blood vessels, location within the colon,

and extent of surgical therapy.⁵ Therefore, survival is governed by hepatic failure, and logical treatments to postpone hepatic failure caused by tumor growth should be instituted early in the course of the disease. The effective management of diffuse intrahepatic cancer is a challenging but potentially rewarding problem. From 50 per cent to 75 per cent of patients who die from cancer have metastasis in the liver,³ but of more significance is the fact that hepatic metastases often prevent cure although the primary lesion can be controlled by surgical resection.⁷

The concept of the regional arterial infusion chemotherapy for hepatic malignancy is well established. Watkins et al¹³ have defined a standardized operative technique for hepatic infusion. Ansfield et al,¹ Massey et al,¹⁰ and Tandon et al,¹² have reported different techniques of percutaneously placed catheters for hepatic artery infusion, but the length of infusion did not exceed 21 days in any of the series reported. The purpose of this study is to present a new approach for percutaneous long-term hepatic artery infusion.

MATERIALS AND METHODS

This study included 26 patients who were treated by regional infusion of the liver at the Cleveland Metropolitan General Hospital since January 1972. Two patients received hepatic artery infusion twice.

(Continued on next page)

EDWARD G. MANSOUR, M.D., *Assistant Professor of Surgery, Case Western Reserve University, Cleveland Ohio; Director, Surgical Oncology, Cleveland Metropolitan General Hospital, Cleveland, Ohio.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

The patients presented a variety of primary cancers with the majority being in the colon (Table I). In each case the infusion catheter was inserted percutaneously through a high brachial or axillary artery approach in the non-dominant upper extremity. A celiac axis arteriogram with Hypaque® 50 per cent is initially performed to delineate the arterial anatomy of the liver. When the right and left hepatic arteries arise from a common hepatic artery trunk, the tip of the catheter is hooked and advanced into the hepatic artery under fluoroscopic control. In two cases the right hepatic artery arose from the superior mesenteric artery, and infusion was carried out to the right lobe of the liver only. The catheter is then safely anchored to the skin of the axilla and connected to the infusion pump. Three patients had the tip of the infusion catheter

TABLE I
PERCUTANEOUS HEPATIC ARTERY INFUSION

Number of Procedures	28
Number of Patients	26
Site of Primary Disease	
Colon	14*
Liver	4
Biliary Tree	3
Pancreas	2
Stomach	1
Gall Bladder	1
Breast	1

*One case was LEIOMYOSARCOMA OF RECTUM

proximal to the origin of the gastroduodenal artery, but none of these patients developed nausea, vomiting, gastrointestinal bleeding, or clinical and chemical signs of pancreatitis.

Continuous hepatic infusion is started immediately after placement of the catheter on the basis of 15mg/kg/day of 5-fluorouracil for a ten day induction period. This is followed by a maintenance regimen of continuous infusion with 2mg/kg/day. The induction is usually performed in the hospital, using a high flow Sigmamotor pump, and the maintenance phase is carried out on ambulatory out-patient basis using the Sigmamotor® ML6-2 battery operated pump with a microflow of 6-7 ml per 24 hours.

RESULTS

Twenty-six patients with a variety of primary and metastatic hepatic or biliary carcinomas had hepatic arterial catheters placed percutaneously through a high brachial or axillary approach. The primary sites of the tumor and their clinical responses are shown in Table II. All patients were classified as responders when they fulfill the following criteria:

1. Decrease in palpable liver size by six cm or more.
2. Reduction in abnormal elevated liver functions by 50 per cent or more.
3. Unequivocal regression of tumor by liver scan.
4. Maintained improvement for longer than three months.
5. Subjective improvements: appetite, weight gain, improvement of functional status, and loss of pain.

TABLE II
PERCUTANEOUS HEPATIC ARTERY INFUSION

	Number Treatments	Number Evaluable	Responders	
Colon	16	14	9	64.3%
Liver	4	4	1	
Biliary Tree	3	2	1	
Pancreas	2	2	1	
Stomach	1	1	0	
Breast	1	1	1	
Gall Bladder	1	0	0	
	28	24	13	54.2%

In the whole group 13 out of 24 cases showed definite evidence of regression of their disease with a response rate of 54.2 per cent. Nine out of the 14 patients with colonic carcinoma metastatic to the liver showed objective regression with a response rate of 64.3 per cent. These response rates are similar to those described by Donegan et al,⁶ Tandon et al,¹² Ansfield et al,¹ and Massey et al,¹⁰ for hepatic arterial infusion and far more superior than the 17-23 per cent response rate with systemic intravenous 5-fluorouracil.

The duration of the infusion is determined by the length of the stability of the catheter in the hepatic artery, the patency of the hepatic artery and the progression of the disease. The position of the catheter is initially checked radiographically every four to five days while the patient is in the hospital and every month thereafter. The average length of arterial infusion is thirteen weeks with a range from six weeks to seven and one-third months.

COMPLICATIONS

The complications encountered in this group of patients are outlined in Table III. Four patients lost their distal peripheral pulse without functional deficit or ischemic changes in the extremity where the catheter was placed. The infusion was continued in all four cases. Two patients thrombosed the hepatic artery, while a third patient developed a fistula between the common bile duct

TABLE III
PERCUTANEOUS HEPATIC ARTERY INFUSION
COMPLICATIONS

Loss of Peripheral Pulse Without Functional Deficit	4
Bleeding at Puncture Site (no transfusion)	1
Upper Gastrointestinal Bleeding	1
Hepatic Artery — C.B.D. Fistula (No Hemobilia)	1
Hepatic Artery Thrombosis	2
Pancreatitis	1*
Sepsis	1*
Cerebrovascular Accident (Emboli)	1*
Mortality Attributed to Catheter	1*

*These complications occurred in ONE patient.

and the hepatic artery without hemobilia. One patient who bled from the entry site of the catheter was treated with pressure application and observation without the need for blood transfusion or removal of the catheter. A patient with history of acid peptic disease of the upper gastrointestinal tract had massive bleeding with aspiration and death. In one of the twenty-four evaluable cases the catheter was removed after the onset of pancreatitis with sepsis. This patient immediately after withdrawal of the catheter developed occlusion of the right middle cerebral artery with hemiplegia and expired nine days later. Post-mortem examination showed extensive metastasis to the liver, periaortic, suprapancreatic, and cervical lymph nodes. Examination of the brain showed embolic occlusion of the right middle cerebral artery with multiple septic emboli in both cerebral hemispheres.

The only complications attributable to the percutaneous approach are loss of peripheral pulse, bleeding at catheter puncture site, and cerebral vascular embolization and death. The remaining complications are similar to but less frequent than those described by Cady⁴ in patients with catheters placed directly in the hepatic artery by laparotomy.

DISCUSSION

A recent analysis of the natural history of 390 patients with hepatic metastases from a variety of cancers indicated that only seven per cent of patients lived more than one year with an overall median survival time of 75 days.⁵ The mean survival rate of 177 patients with metastatic carcinoma of the colon was 146 days, 37 of the 177 patients survived for more than ten months. Seventy-five patients with metastatic gastric carcinoma and 54 patients with metastatic cancer of the pancreas and biliary tract had a 50 per cent mortality within two months after diagnosis with a median survival of 60 days for gastric carcinoma and 42 days for biliary and pancreatic carcinoma.

Swinton et al,¹¹ reported their six year result of hepatic artery infusion for metastatic carcinoma of

the colon. In 82 treated patients the six and twelve month survival rates were 65.9 per cent and 36.6 per cent, respectively, compared to another group of 67 untreated patients whose six and twelve month survival were 31.6 per cent and 17.9 per cent, respectively.

We do not intend to compute survival data from our small group but are very much encouraged that our response rate is commensurate with that of hepatic arterial infusion rather than systemic intravenous infusion. Based on the improvement in survival with prolonged maintenance chemotherapy in metastatic carcinoma of the breast, Hodgkin's disease, malignant lymphomas, and leukemias we are expecting improved survival data with our long-term percutaneous hepatic infusion. We realize that placement of the catheter through an exploratory laparotomy may achieve a better stability and precision, but it also carries a higher risk. We urge the operative placement of the catheter in the hepatic artery through the gastroduodenal artery at the initial surgical intervention; but if it has not been inserted at the first operation, we believe that reexploration is not necessary. We encourage the use of the percutaneous, long-term, ambulatory hepatic artery infusion, particularly for those debilitated, high-risk patients with marked hepatomegaly, liver decompensation, prior history of surgery in the upper abdomen, and ascites. Patients who demonstrated evidence of extensive local disease at the initial exploration but in whom the surgeon was unable to dissect safely the region of the hepatic artery and those who refuse surgery compose the best candidates for the percutaneous approach.

SUMMARY

1. This percutaneous approach should not replace the operative placement of the catheter at the initial surgical intervention.
2. The percutaneous infusion can be performed on patients who: (a) Are poor surgical risks; (b) Refuse surgery; (c) Had previous surgery in the upper abdomen so as to make operative catheterization difficult and lengthy; and (d) Have extensive local disease so that operative catheterization is impossible even at the initial surgical intervention.
3. The percutaneous infusion can be safely continued on a long-term, ambulatory, and out-of-the-hospital basis.
4. The rate of response of 64.3 per cent is similar to that obtained by the operative catheter.

(Concluded on page 122)

Radiation Effects Of Radiiodine On The Thyroid

Effects Vary With Dosage And Sensitivity Of The Gland To Radiation

By Brown M. Dobyns, Ph.D., M.D.

Shortly after radioiodine became available, its usefulness in the study of the physiology of the thyroid for diagnosis and therapy become apparent. As with all new tools in medicine, the question of hazards as well as benefits arises. In the case of radioiodine the benefits have far overshadowed the possible deleterious effects. Medicine has been blessed with a tool that has helped countless individuals with thyroid disease.

Early after the introduction of radioiodine, doses of significant size were given with great caution to reduce the excessive production of thyroid hormone in patients with hyperthyroidism. Two matters of concern were raised. One was the possibility of the formation of neoplasms resulting from radiation injury to tissues, as was known to occur following some other types of radiation. The other was excessive destruction of the thyroid so that the individual subsequently might suffer from hypothyroidism. The latter is easily corrected by giving supplemental thyroid hormone, provided the individual understands the nature of his deficiency and is fully re-

BROWN M. DOBYNS, Ph.D., M.D., *from the Department of Surgery, Case Western Reserve University School of Medicine at Cleveland Metropolitan General Hospital, Cleveland, Ohio.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

sponsible for maintaining his own health for the remainder of his life. This we shall not discuss further. The former issue of neoplasm formation has been solved in some respects by widespread clinical use of therapeutic doses of radioiodine without the development of unusual numbers of neoplasms.

RADIATION AND NEOPLASIA

In spite of the reassurance that the practical and extensive use of that radioiodine (^{131}I) has afforded, there are some observations regarding neoplasm formation that give us reason to continue to explore this issue. This is what I should like to review today.

Several observations are noteworthy:

1. During the mid 1950s and 1960s an unexpected occurrence of papillary carcinomas began appearing in the thyroids of some young adults who had been treated 10 or 12 years earlier by x-ray therapy about the head and neck for acne, hypertrophied tonsils, and thymic hypertrophy, etc. when they were young children.

2. As time has passed, we have learned that neoplasms of the thyroid are produced by radiation from radioiodine more readily in animals than was once thought. Some of these grow rapidly once they develop; others are obviously benign.

3. There are more spontaneous malignant neoplasms of the thyroid in clinical subjects with

Graves' disease than was appreciated in the past, but there is considerable question as to what their clinical potential may be.

4. The size of the dose of ^{131}I which initiates neoplasms is not the same that curtails thyroid function or causes serious distortion of the architectural structure of the gland. The nucleus of the thyroid cell is more readily damaged by radiation than is the cytoplasm. The cell may survive and continue to produce some hormone while its nucleus bears some subtle damage that may only become manifest at the time of cell division.

5. The dose which causes intrinsic derangement of the nucleus of the cell may destroy the capacity for cell division and thus preclude neoplasm formation. But somewhat less radiation may cripple only the mitotic potentiality, resulting in a cell which, when it attempts to divide, dies or, if it does divide, exhibits cytogenetic aberrations which may be manifest in a new cell line and a clone of cells that give rise to a neoplasm.

6. In spite of the very low incidence of malignant thyroid tumors following ^{131}I therapy, radioiodines have produced a surprisingly high incidence of neoplasms under some conditions in man, such as the Marshallese who were exposed to fallout from the hydrogen bomb.

I should like to review the basis for some of these statements and make some interpretations of observations that we and others have made.

A relationship between x-radiation to the head, neck, or thymic area in young children and the subsequent development of carcinoma of the thyroid was first described by Duffy and Fitzgerald¹ in 1950. By 1961 Winship and Rosvoll² had collected 562 cases of thyroid carcinomas in children under the age of 15 years. They made an exhaustive effort to trace and gain additional information concerning radiation exposure in these individuals. Of all of those who could be traced and questioned, an exposure to radiation was found in 80 per cent. In many cases the radiation given was relatively low. As experience has been gained by many physicians, it seems clear that this relationship is valid and that the latent period for some of the thyroid masses is greater than one and one-half decades after the radiation exposure.^{3, 4, 5}

EFFECTS ON THE CELL

The effects of radiation from radioiodines is dose dependent not only on different parts of the cell but on different parts of the thyroid. The apparent greater sensitivity of the nucleus than of the cytoplasm has been mentioned. Very early in the ex-



Figure 1 Bizarre Nuclear Form in a Thyroid of Graves' Disease Treated One Year Previously with Radioiodine.

perience with this form of therapy some of us biopsied the thyroid or did a thyroidectomy because of the persistence of hyperthyroidism. Bizarre nuclear forms were seen in some of these glands (Fig. 1). If the hyperthyroidism was abolished, evidence of cellular hyperplasia and cellular hypertrophy (commonly recognized in the gland of Graves' disease) was gone, but some nuclei seemed very large and irregular, as is seen in some malignant neoplasms. Even though the hyperthyroidism might still be present and the hyperplastic state of the gland was still evident, the large irregular nuclear forms often had developed. In addition to the large nuclei, there were others which were smaller than normal, as if they had lost some of their chromatin. In spite of the bizarre nuclear forms, the cells were surviving and functioning to some extent some years after radiation. Occasionally these strange cells appeared in clusters (Fig. 2) in the thyroid of patients in whom the driving force behind Graves' disease was still apparently operative and the gland was not sufficiently damaged to control thyrotoxicosis. In spite of this as years have passed, few neoplasms have come to light in spite of this widely used therapy.

To better evaluate the possible hazards of the subsequent development of leukemia⁶ or neoplasms of the thyroid, a retrospective study was set up

(Continued on next page)

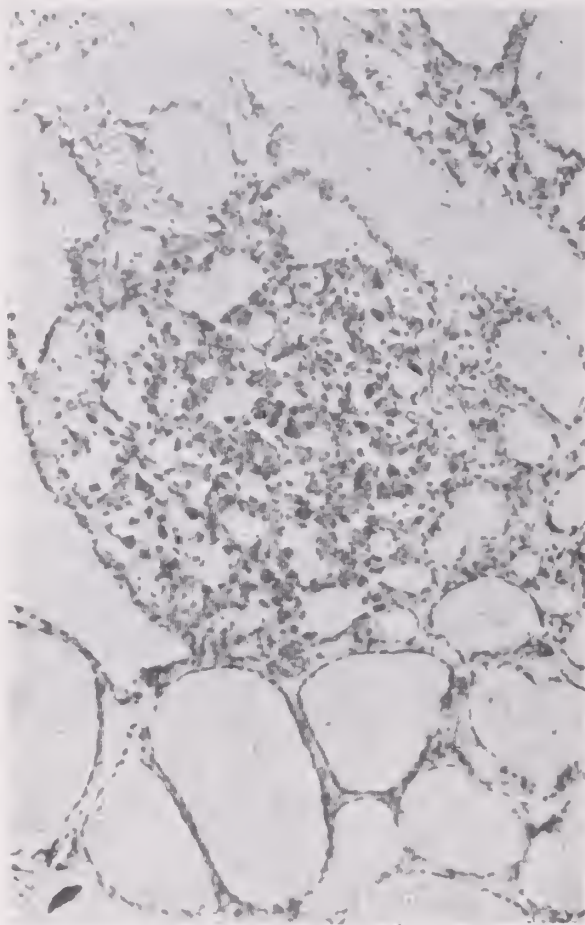


Figure 2 A Microscopic Cluster of Cells with Bizarre Nuclear Forms in the Thyroid of Graves' Disease Previously Treated Several Times with Radioactive Iodine.

under the auspices of the Division of Radiological Health of the Department of Health, Education and Welfare to trace all patients treated with radioiodine between January, 1946 and December, 1964. Twenty-six centers particularly interested in thyroid disease participated. Those patients that had been treated by thyroidectomy or chronic antithyroid drugs in the same centers were used for comparison. There was a total of 36,050 patients in the study, 21,714 treated by ^{131}I , 11,732 by thyroidectomy, and 1,238 by chronic use of antithyroid drugs. As a result of diligent search, 98 per cent of the find-tients were traced. Some of the details of the findings with respect to leukemia⁷ and to benign and malignant neoplasms⁸ have been reported. Although there may be some association between hyperthyroidism and leukemia, there was no statistically significant difference in the occurrence of leukemia among patients treated with radioiodine or surgery.⁷

NATIONAL STUDY

In this large national study some patients who

TABLE I
MALIGNANT LESIONS IN GRAVES' DISEASE

Primary Rx.	Total Treated	Co-occurring At Primary Rx. or within 1 yr.	Malignant Lesions Post-occurring After more than 1 yr. number operated or Re-operated	Malignant Lesions
Thyroidectomy	10,013	41	110	3
Radioiodine	19,186	6	129*	16
Antithyroid Drugs				
1 yr. or more	1,144		331	4

*There were 494 patients who had developed palpable nodules which were not palpable before the ^{131}I therapy and which had not been removed at the close of the study. Since the latent interval between radiation exposure and the development of neoplasms is long and the rate of growth often very slow, it is unfortunate that continued follow-up was limited by the cost of the study.

were subjected to thyroidectomy as primary treatment were found to have a malignant neoplasm. In three fourths of these cases the lesion was very small. No mass had been palpated before surgery. Because some patients treated with ^{131}I might have harbored such a neoplasm at the time radioiodine was given, any neoplasm which was found within one year of ^{131}I treatment was considered to have been a pre-existing lesion. Therefore patients were divided into two groups. Lesions which were removed within one year of primary therapy and found to be a malignant lesion were classified as a "co-occurring" lesion, in which case it could not be attributable to the form of therapy that had been used. Lesions removed one year or more after primary treatment were considered "post-occurring" lesions. The findings are shown in Table I. This study shows that malignant neoplasms after ^{131}I are very rare.

On the basis of the accidental finding of 32 tiny co-occurring malignant lesions found among 8,460 Graves' disease patients who had no palpable mass in the thyroid and who were treated by primary thyroidectomy, it may be predicted that 61 occult malignant lesions might already have existed in the 16,042 patients treated with radioiodine. Of those patients with Graves' disease who had no palpable lesion at the time of ^{131}I treatment and who were later operated (both co-occurring and post-occurring lesions), only 12 histologically proven malignant lesions were found. However, at the time the study closed there were 494 individuals who had developed palpable masses which had not been removed.

None had been detected before ^{131}I therapy was given. Some of these masses could represent very slowly growing malignant lesions, but unfortunately the study was terminated before the nature of the masses could be known.

The types of malignant lesions found in this study were of considerable interest. Among the patients classified as having a co-occurring lesion, all were of low grade; no anaplastic lesions were found, but two may be considered as solid cellular. In contrast, among 16 malignant post-occurring lesions found in Graves' disease patients whose primary treatment had been radioiodine four were anaplastic. In an additional case treated first by thyroidectomy and later by radioiodine, the lesion was a fibrosarcoma one year after the radiation. In still another case which could not be classified (Graves' disease or toxic adenoma — not one of

the 16 above), a "spindle cell carcinoma" was found. All patients died rather promptly of these highly malignant lesions. It is interesting that the majority of the lesions found in our experimental animals (rats, to be described later) were also solid cellular in type, and many were quite anaplastic.

In this clinical follow-up study neoplasms occurred more frequently when the ^{131}I had been used during the first two decades of life. However, the number of children in the study was relatively small because of the caution exercised by the centers and the decreasing use of ^{131}I in children as time passed during the study.* In general it may be concluded from this very large number of patients studied that the hazard of malignant neoplasia is not great; however, considering the long latent period for development and slow growth rate of many thyroid neoplasms, the follow-up period for ^{131}I treated patients was short in this study (average 8 years).

EXPERIMENTAL STUDIES

Early in our experimental attempts to produce thyroid neoplasms in animals (rats) with radio-



Figure 3 A Microscopic Section of Rat Thyroid with Superimposed Autoradiograph, Illustrating a Small Non-functioning Neoplasm Arising Near the Periphery of the Thyroid 18 months after ^{131}I .

The animal was given a small amount of ^{131}I and tritiated thymidine 4 hours before sacrifice. The fine stippling over the normal follicles is produced by radioiodine. There is no radioiodine taken up by the neoplasm in the center of the illustration. The intensely black dots over some of the nuclei of the neoplasm identify those cells which were undergoing cell division within the preceding 4 hours. Such concentrations of thymidine over the nuclei in the normal tissue were extremely rare except where the cells of the neoplasm appear to have breached its capsule at the right.

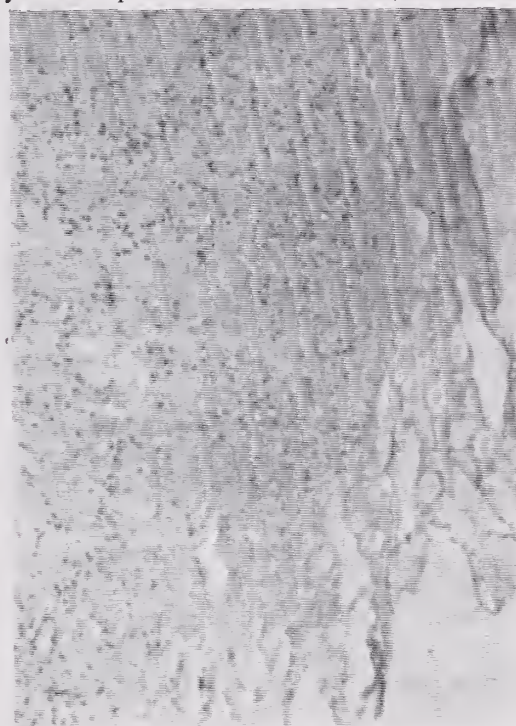


Figure 4 A Neoplasm Found in a Rat Thyroid 16 months Following ^{131}I .

The blackened spots (see description fig. 3) on the film superimposed on the microscopic section identify those cells which were undergoing mitosis within the 4 hours preceding sacrifice. The mitotic activity in this lesion is very great compared to that in the normal tissue to the right. This is a very rapidly growing anaplastic lesion.

(Continued on page 122)

Clotting Factors In Burn Sepsis

Studies Suggest Correlation Between Platelet Function And Presence Of Sepsis May Be Of Diagnostic Value

By Richard B. Fratianne, M.D.

In the last several years much attention has been focused on clotting abnormalities in association with thermally injured patients.² The syndrome of intravascular coagulation is a well established clinical entity which has been associated with a wide variety of precipitating factors including incompatible blood transfusions, neoplasms, septic shock, anmiotic fluid emboli, snake-bite, and Waterhouse-Friderichsen syndrome. The diagnosis of disseminated intravascular coagulation (DIC) is ordinarily made on the basis of depressed levels of fibrinogen, Factor V (proaccelerine), Factor VIII (antihemophilic factor), thrombocytopenia, and abnormal fibrinolysis indicated by the presence of the split products of fibrinogen; or more recently, the demonstration of fibrinogen related antigens. The clinical diagnosis of DIC is usually associated with a bleeding disorder and is treated by the administration of heparin. Since sepsis has been established as one of the more common clinical entities with which DIC has been correlated, one would expect that the diagnosis of DIC would be made often in patients suffering sepsis from thermal in-

jury. However, this diagnosis remains difficult to establish in burn sepsis because fibrinogen, Factor V, and Factor VIII are often normal or elevated in burn patients, as McManus has reported, there may be elevations of titers of fibrin split products in burn patients not associated with a bleeding disorder but rather associated with surgical debridement under anesthesia.

Burn sepsis remains one of the leading causes of death in severely burned patients. Of the 397 patients that have been admitted to the Burn Unit at Cleveland Metropolitan General Hospital since our opening in 1970, 50 patients have died. Thirty-nine of the patients who died survived beyond the resuscitative phase, and of those 39 patients 29, or 75 per cent have died from sepsis. Therefore, it is apparent that the early diagnosis and treatment of sepsis is probably one of the most important factors which could lead to improved survival in badly burned patients. We, therefore, attempted to design a prospective study to attempt to correlate changes in the clotting factors with the clinical course of our patients to see whether there was any predictable relationship between the presence or severity of defects in the hemostatic mechanism of these patients and the development of septicemia.

Patients selected for study included 18 adults who had sustained 25 per cent or greater full thickness body surface area burns. They ranged from 25 per cent to 95 per cent body surface area with

RICHARD B. FRATIANNNE, M.D., *Department of Surgery, Case Western University School of Medicine at Cleveland Metropolitan General Hospital, Cleveland, Ohio.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

SCREENING CLOTTING TESTS

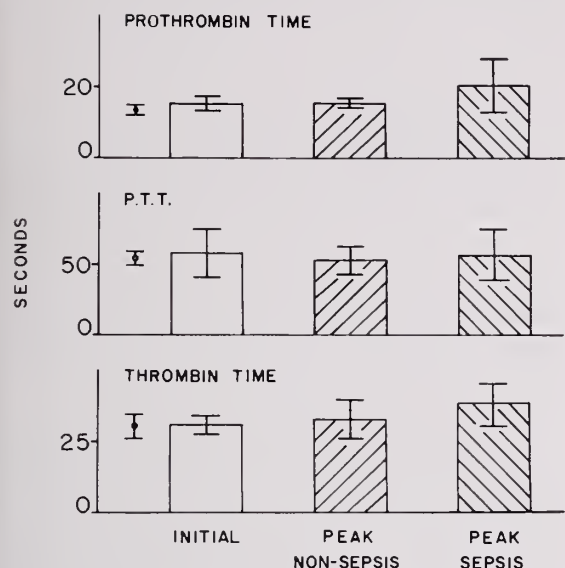


Figure 1. Comparison of mean peak values for prothrombin time, partial thromboplastin time and thrombin times. The vertical lines represent one standard deviation.

an average of 72 per cent. Initial platelet and clotting studies were performed within 48 hours of admission and were repeated at least weekly until the patient was either discharged or died. These tests included prothrombin time, partial thromboplastin time, thrombin time, fibrinogen levels, Factor V and Factor VIII levels, platelet counts, and the determination of fibrin split products. In addition, in several patients platelet aggregation was evaluated. All patients studied survived beyond the resuscitative phase. The values obtained were collated into two groups on the basis of the presence or absence of bacteria cultured from the blood at the time the clotting factors were determined. When the cultures of blood were sterile, the patient was considered non-septic; and when bacteria were found, the patients were considered to be septic. In general, the clinical state of the patients with positive blood cultures fit the usual criteria for the diagnosis of sepsis although shock was not present in each case.

RESULTS

Figure 1 illustrates the changes observed in the screening clotting tests observed. Normal values are illustrated along with their standard deviation. The open column indicates the mean initial values which were observed and their standard deviation. The middle hatched column represents the mean peak values for all patients obtained when no sepsis was present, and the hatched column to the right

CLOTTING FACTOR ASSAYS

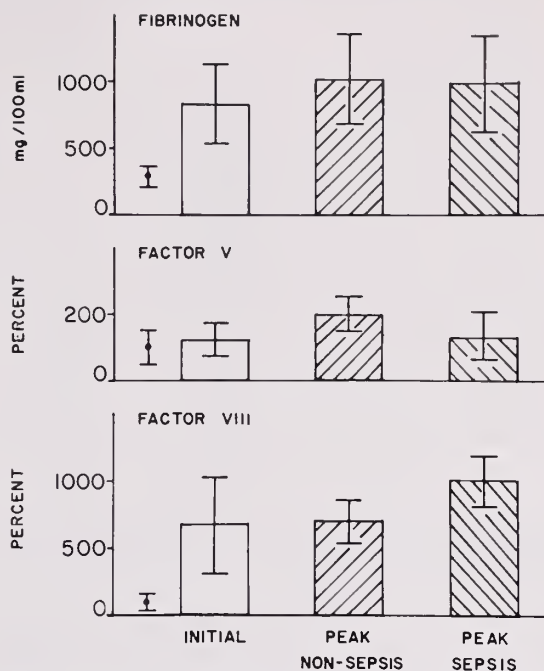


Figure 2. Comparison of mean peak values of fibrinogen, Factor V, and Factor VIII. The vertical lines represent one standard deviation.

indicates the mean peak values obtained in those patients who were septic at the time the tests were performed. The initial prothrombin times as well as prothrombin times observed without sepsis were normal, while the prothrombin time observed in patients who were septic was slightly prolonged and had a larger standard deviation. There was no significant difference observed. The partial thromboplastin times were normal on the initial evaluations, and remained normal when sepsis was absent as well as when present. Similar non-significant changes were observed in thrombin time determinations.

The results of the clotting factor assays are illustrated in Figure 2. The levels of fibrinogen measured initially were two to four times normal and characteristically increased during the subsequent weeks of hospitalization. They were not appreciably affected by the presence or absence of sepsis. Factor V levels were within the normal range at the time of admission and increased approximately two-fold during the hospital course. The levels of Factor V observed in patients when they were septic were decreased when compared ever, even during sepsis these levels remain in the normal range. Factor VIII levels were three to

(Continued on next page)

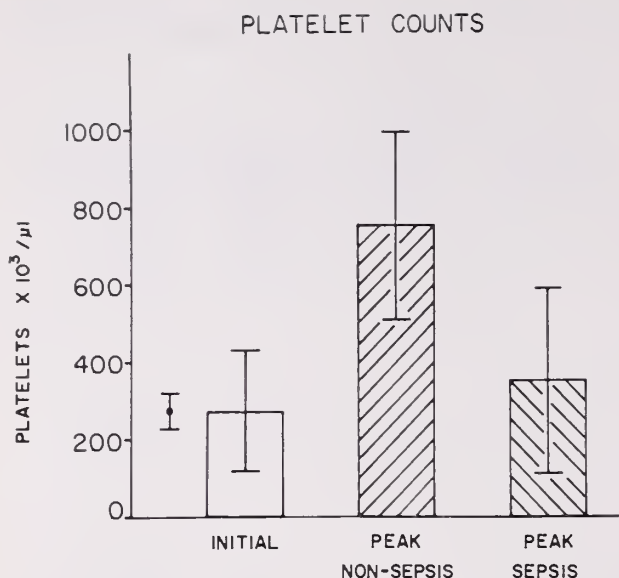


Figure 3. Comparison of mean peak values of platelet counts in the presence and absence of sepsis. The vertical lines represent one standard deviation.

the levels obtained when they were not septic; how-eight times normal initially and did not change appreciably except for an increase observed when patients were septic.

The mean initial platelet count observed in each of the 18 patients was normal. The mean platelet counts for patients without sepsis was 586,000/mm³ with a standard deviation of 230,000/mm³. The average platelet counts for patients with sepsis was 279,000/mm³ with a standard deviation of 189,000/mm³, giving a significant difference with a P-value of less than .01. However, when the peak values are plotted as shown in Figure 3, it becomes apparent that while the average platelet counts are significantly lower in patients when they are septic, the peak values are not significantly different; and any individual platelet count taken while the patient is septic would not be a valid indicator of the presence of sepsis.

In addition to the usual screening clotting tests, clotting factor assays, and platelet counts, several of the more recent patients studied had platelet function evaluated in response to the three standard aggregating substances: adenosindiphosphate, epinephrine, and collagen. Citrated platelet-rich plasma is a cloudy suspension with high optical density. After addition of the aggregating agent, the platelets clump resulting in a reduction in the optical density. The maximal aggregation is equivalent to the total change in the optical density, while the rate of aggregation is calculated from the slope of the aggregation curve. The preliminary

results in the patients studied indicate that platelet function is depressed initially, but generally improves as the patient emerges from the resuscitative phase of his therapy. Platelet function appears to be depressed, however, in patients while they are septic. The change in platelet function is illustrated in both a decrease in maximal aggregation as well as rate of aggregation, and the altered platelet function appears to return toward normal when the patients recover from their septic episode.⁵ It also appears that platelet function is altered coincident with surgical debridement under anesthesia. Many more patients will have to be studied before a statistical evaluation of these responses is possible.

The clinical course of patient J.B. is illustrative of the usual findings found in patients who developed sepsis during their hospital course. This 27 year old male was admitted to the Burn Unit at CMGH shortly after sustaining 85 per cent total body surface area burns of which 40 per cent was full thickness and the remainder was second degree and deep second degree in depth. His initial platelet count was 210,000/mm³. His initial fibrinogen level was 1,110 mg per cent. The partial thromboplastin time, prothrombin time and thrombin time were normal. Factor V assay was 96 per cent of normal, and Factor VIII assay was increased seven-fold above normal. These values remained normal until the 12th day, when the patient was noted to develop a bleeding disorder and pseudomonas was isolated from his blood. He was treated with appropriate antibiotics and heparin and responded. During his septic course, his platelet counts fell to between 100,000 and 180,000/mm³, while the prothrombin time and fibrinogen levels remained normal. His platelet function was depressed during the septic episode.

Following recovery the platelet counts rose to 340,000/mm³, while the prothrombin time, fibrinogen, and partial thromboplastin time remained normal. Factor VIII levels remained elevated, and the Factor V levels were within the normal range. On the 31st hospital day the patient again became septic, and pseudomonas was again cultured from the blood. At this point the fibrinogen level fell to 540 mg per cent, the platelet count fell to 92,000/mm³, the partial thromboplastic time was depressed, and the prothrombin time was normal. Whereas the platelet function had improved dramatically following a clearing of his first episode of sepsis, it again became markedly abnormal. Even

(Concluded on page 126)

Microcirculatory Dynamics And The Control Of Hemorrhage

Flow Is Dependent On Radius Of Vessel, Pressure Within Vessel, And Blood Viscosity

By Robert W. Hopkins, M.D.

In the now classic monograph, "Traumatic Shock," which followed observations made during the First World War, Doctor Walter B. Cannon¹ emphasized the importance in shock of focusing attention of the capillary portion of the circulatory system. "This is the essential region. All of the parts of the circulation — heart, arteries, and veins exist in order to provide a continuous flow of blood through the capillaries." The aim of treatment in shock, therefore, is to provide an "increased nutritive flow through the capillaries all over the body." Among Doctor Cannon's disciples, Doctor Simeone has been foremost in confirming, expanding, and promulgating this concept. In 1959, the journal "Anesthesia and Analgesia" reprinted two editorials^{2, 3} bearing on shock, one on "Shock and Blood Pressure" by Doctor Simeone and the other on "The Conquest of Space — by the Red Blood Cell" by Doctor Francis Moore. Both are relevant to a consideration of the microcirculatory dynamics in patients with severe hemorrhage.

Doctor Simeone called attention to the increasing use at that time of vasoconstrictor substances,

ROBERT W. HOPKINS, M.D., of the *Miriam Hospital, Providence, Rhode Island.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

Supported by The Miriam Hospital and by PHS Research Grants Nos. GM 18385 and 19930 from the National Institutes of Health.

especially I-norepinephrine and metaraminol, in the management of clinical shock. He noted that shock was characterized by poor perfusion of tissues and organs, and that "the circulation conducts its affairs at the capillary." With respect to the use of the vasoconstrictor substances, he cautioned that "the empiric use of potent sympathicomimetic agents to raise the blood pressure can jeopardize the patient's chances for recovery. Not only do these substances sometimes have fatal untoward effects, but by permitting the physician to rest in the security of a normal arterial blood pressure, obtained at the expense of the capillary circulation beyond, they can contribute to a fatal outcome."

In Doctor Simeone's laboratories through the years many of his colleagues have been interested in the altered hemodynamics and consequent metabolic abnormalities of shock. The abnormal transport processes in shock, which preclude the normal exchange of nutrients, oxidizing agents, and metabolites among the capillaries, interstitial fluid, and cells, clearly indicate the need for improvement of flow in the microcirculation

An apparent paradox, however, is the fact that with major hemorrhage, one of the principal causes for shock, a primary goal is to reduce the blood flow in the open and bleeding vessels. The obvious and best method for stopping the persistent flow of blood through an open vessel without compro-

(Continued on next page)

misgiving the circulation to other tissues is ligation of the vessel. There are, however, circumstances under which the accomplishment of this objective is both difficult and perilous. Mechanisms by which the rate of bleeding may be reduced, while adequate transport of essential substances to and from tissues is maintained, are, therefore, of considerable interest. We would like to present some of our observations which bear on this point.

THEORETICAL CONSIDERATIONS

The laws governing the flow of blood in the vascular system are complex. Some of the basic laws concerning fluid dynamics are relevant and may be considered, although when applied to the flow of blood they are oversimplifications.

a) "Ohm's Law": Ohm's Law states that the drop in voltage (E) across a resistance is proportional to the product of the current flow (I) and the resistance (R): $E = IR$. Applied to the circulation, the pressure drop (ΔP) in any portion of the circulation is proportional to the product of the flow (Q) through that portion of the circulation and the resistance (R) of that portion of the

$$\text{vascular bed, i.e., } \Delta P = QR, \text{ or } Q = \frac{\Delta P}{R}.$$

Resistance results primarily from the dimensions of the vascular bed (especially the radius of small vessels) and the viscosity of blood (Hagen-Poiseuille's Law).

b) Hagen-Poiseuille's Law:

$$Q = \frac{1}{\eta} \cdot \frac{\pi r^4}{8L} : \Delta P$$

This equation describes laminar flow (Q) of a viscous fluid (viscosity η) in a cylinder of radius r and length L with a pressure gradient ΔP . Flow under these circumstances is proportional to the viscosity.

From these laws (although not rigidly applicable to the circulation of blood) it is apparent that the principal determinants of flow within an individual vessel are (a) the radius, (b) the pressure differential, and (c) (with laminar flow) the viscosity. Under appropriate circumstances, measures which lead to a reduction of the radius of the bleeding vessel, a decrease in pressure, or an increase in viscosity may all be used to effect a reduction in flow from a bleeding vessel.

The effectiveness of reducing the radius of the vessel in control of hemorrhage has been demonstrated by several investigators. This principle ap-

plies to such techniques as the local application of vasoconstrictor agents for hemorrhagic gastritis,⁴ and the infusion of vasopressin into the arteries supplying a bleeding point in the gastrointestinal tract.⁵ They must be used with caution, however, because they rely on arteriolar constriction with possible consequences of impaired blood flow at the capillary level. Intestinal necrosis has been reported to follow mesenteric arterial infusion of vasopressin.^{6, 7}

In our laboratories we have studied primarily the effects of alterations in blood pressure and the viscosity of blood on rate of bleeding. These observations, made in oligemic animals and in patients with severe hemorrhage, form the basis for this report.

CONTROLLED NORMOVOLEMIC HYPOTENSION

In the experimental laboratory we have investigated the effects of several vasodilators in shock, the rationale being to prevent excessive arteriolar constriction and promote the exchange of substances of the capillary level. In animals subjected to severe hemorrhage we have failed to demonstrate a protective effect of vasodilators (Arfonad® and Dibenzyline®) if the model was arranged so that the vasodilator was not permitted to influence the volume of blood shed by the animal.^{8, 9} If, on the other hand, hypotension was maintained by the administration of Arfonad®, but the shed blood was permitted to return to the animal, the metabolic status of the animal improved markedly when compared to an equally hypotensive but still oligemic control animal. Transfusion without the use of a vasodilator, however, led to an equally rapid reversal of the metabolic abnormalities, indicating that restoration of the normal blood volume, rather than the level of blood pressure and the degree of vasoconstriction or vasodilatation, was the most important variable under the observed experimental conditions. These studies with Arfonad® have indicated, however, that the drug-induced hypotension may be well tolerated following a period of shock if the blood volume is restored to normal.

Because the blood flow through a bleeding vessel is proportional to the pressure, it seemed reasonable to attempt to lower the pressure in order to reduce bleeding under appropriate circumstances. Similar considerations influenced the development of controlled hypotension in anesthesia as initiated by Gillies.¹⁰ We, therefore, have used controlled hypotension with restoration or maintenance of a

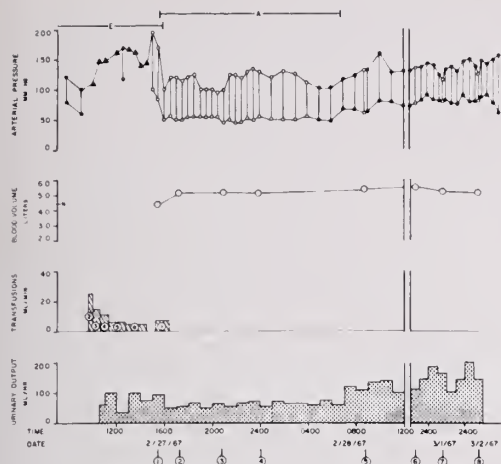


Figure 1. Massive upper gastrointestinal bleeding (E) in a patient with chronic pancreatitis, a pancreatic abscess, empyema, subphrenic abscess, and fecal fistula (see text). The institution of controlled normovolemic hypotension with Arfonad® (A) was followed by cessation of bleeding. Urinary output remained at satisfactory levels.

normal blood volume to reduce the rate of bleeding in patients with massive hemorrhage which could not be readily controlled by surgical means.^{11, 12}

An example is a 20-year-old chronically and critically ill man with acute pancreatitis which had been complicated by a pseudocyst which ruptured spontaneously. Over the course of the next 8 weeks he developed sub-hepatic and subphrenic abscesses, empyema, a fecal fistula from the transverse colon, and marked hypoalbuminemia (1.4 gm/100 ml). Two and one-half months after the onset of his illness he developed massive hematemesis. Over the space of 10 hours he vomited more than three liters of grossly bloody material. It was apparent that the risk of operation in this patient would have been prohibitive even if the point of bleeding could be readily identified. Controlled normovolemic hypotension was induced and maintained for a period of 15 hours. Bleeding from the stomach slowed and ceased, and no further hemorrhage occurred (Fig. 1). No metabolic abnormalities were observed during the period of controlled hypotension (Fig. 2). The patient subsequently made a slow but steady recovery from his underlying problems. Bleeding did not recur.

We have controlled hypotension in a total of 27 patients. In 15 patients, bleeding ceased coincident with the use of controlled hypotension. In 4 of the patients, however, who were bleeding from esopha-

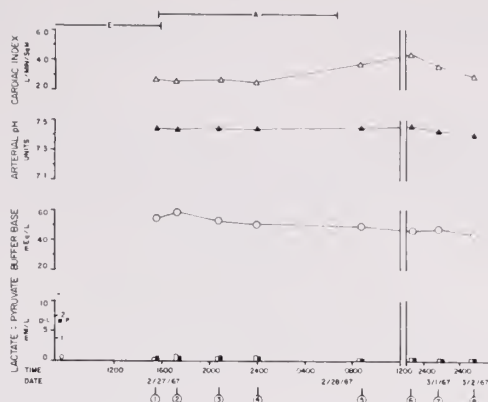


Figure 2. Cardiac index, pH, buffer base, lactate and pyruvate in the patient shown in Figure 1. The cardiac index remained at low normal levels during controlled hypotension. Lactic acid, pH, and buffer base remained normal.

CHANGES IN VISCOSITY WITH HEMATOCRIT (37°C)

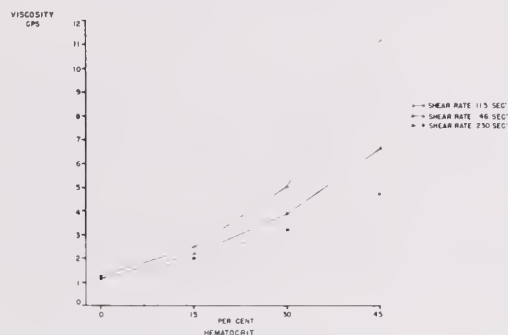


Figure 3. Relationship of hematocrit to viscosity of blood. The viscosity of blood increases with increasing hematocrit at all shear rates. The viscosity is greater at slow than at fast rates of shear.

geal varices, hemorrhage recurred from 12 hours to 5 days after controlled hypotension was discontinued. Significant hemorrhage continued at a reduced rate during and after the administration of Arfonad® in 7 patients. In 5 patients, who died because of problems apparently unrelated to controlled hypotension or persistent hemorrhage, the effects of controlled hypotension on the control of hemorrhage were considered to be indeterminate.

The 11 patients in whom bleeding appeared to be successfully and permanently controlled included principally patients with persistent postoperative hemorrhage and stress ulceration or gastritis. The methods used to induce controlled normovolemic

(Continued on page 127)

Respiratory Monitoring Of The Critically Ill Patient

Automated Monitoring In Intubated Patients Features Time Sharing of Expensive Instrumentation And Automatic Calibration Of Equipment

By Stephen Z. Turney, M.D.

Automated routine monitoring of the respiratory system is of practical clinical use, particularly in intubated patients. The author and his co-workers² have extensively modified many of the methods described by Osborne, et al.¹ Most of the expensive instrumentation involved, including dual digital calculators (instead of a large general purpose computer), a mass spectrometer (instead of multiple gas analyzers), and ultrasonic gas flowmeters (vide infra) are time-shared among several patients to greatly reduce cost. Respiratory gas exchange and pulmonary mechanics data are computed, edited, and displayed on a cathode ray tube, or printed, or both for diagnostic or therapeutic use. Airway measurements are correlated with other data such as blood gases for a more complete and quantitative analysis of ventilation and perfusion status.

Electronic monitoring of critically ill or acutely unstable patients is already a standard practice in most larger hospitals. The electrocardiogram, rectal temperature, and blood pressures via indwelling vascular cannulas are routinely monitored in some units. In many cases the monitoring system has

been computerized to reduce the staffing necessary for continuous scanning of the analog waveforms or digital readouts and to increase the extraction of data available in the monitored signals.

From the technical side the respiratory system offers special challenges for routine monitoring by the nature of the medium being sampled (moist gases of rapidly varying composition, flow, temperature and pressure), plus instability, expense, or impractical bulk of previously employed instrumentation, and the technical training required of personnel attending to such instrumentation. The author and co-workers² developed a relatively inexpensive prototype system which effectively monitored all intubated patients in a 12 bed trauma unit (Maryland Institute for Emergency Medicine, Baltimore, Maryland, R. Adams owley, M.D., Director). An updated and redesigned version of this system is presently being installed in the Open Heart Recovery Room* of the University of Maryland Hospital. This new system is portrayed in block diagram form in Fig. 1. Dual digital calculators interacting through a common connector (bus) greatly increase the flexibility of the system by allowing one calculator continuously to perform routine monitoring, while the other calculator

STEPHEN Z. TURNEY, M.D., *Division of Thoracic Surgery, University of Maryland, Baltimore, Maryland.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

*Respiratory Intensive Care Monitoring Systems, Strathan Instruments, Inc. Oxnard, California

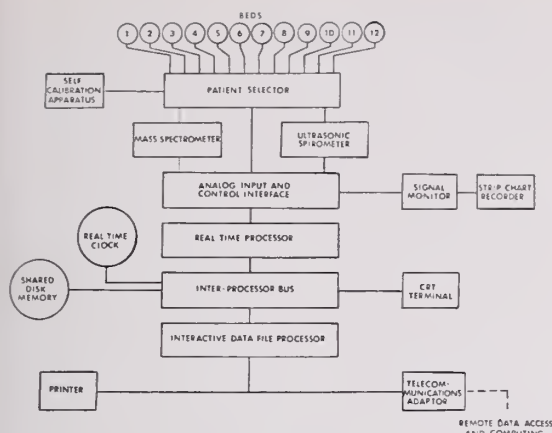


FIGURE 1.

is available for access to the large file of data maintained on a disc memory for each patient. This second calculator permits entry of data obtained off-line, i.e., by means other than the virtually instantaneous analysis of analog waveforms performed by the first, on-line calculator dedicated to this task. Examples of off-line data are blood gas analyses, hemoglobin levels, and urine chemistries which may be correlated with routinely collected on-line data. Since both of these calculators are small and devoted purely to the monitoring system, access to a large commercial or institutional computer is unnecessary, sparing needless complexity in programming and interruption of monitoring by personnel and equipment problems inherent to large computers.

In addition to use of dual calculators, major developments making such respiratory monitoring practical and economical have been: the employment of instrument time-sharing, already mentioned; automatic calibration of the more unstable instruments, use of the magnetic sector mass spectrometer, a somewhat less precise but immensely more practical rapid multiple gas analyzer than the more conventionally used quadrupole instrument; and the ultrasonic flow transducer, which obviates most of the drawbacks of its only major competition, the Fleisch pneumotachometer. The ultrasonic instrument has been extensively redesigned for routine monitoring purposes.³ An adult version having a 15 cc dead space volume is functional, and a 2 cc dead space neonatal model is in development. Direct attachment of a miniaturized strain gauge for total airway pressure and an in-line thermistor for airway gas temperature permit continuous correction of flow and volume measurements for Boyle's gas law as well as direct computation of pulmonary mechanics and respiratory gas

TABLE I	
OUTLINE OF DATA OBTAINED BY THE RESPIRATORY MONITORING SYSTEM	
A. Data Obtained On-Line:	
I. Patient identification	
Date, hour and minute of sample	
II. Vital signs	
a. heart rate	
b. rectal temperature	
c. blood pressure, systolic, diastolic and mean	
d. venous pressure, mean	
III. Pulmonary mechanics	
a. fr: respiratory rate (breaths/min)	
b. VT: tidal volume (cc BTPS)	
c. VE: minute ventilation (l/min BTPS)	
d. VI/VE: ratio of inspired to expired volumes	
e. te/ti: ratio of duration of expiration to inspiration	
f. RT: total non-elastic airway resistance (cm H ₂ O/l/sec)	
g. CT: total pulmonary compliance (L/cm H ₂ O)	
IV. Respiratory gas exchange	
a. FiO ₂	
b. PAO ₂	
>average alveolar	
c. PACO ₂	
d. PECO ₂ mixed expired	
e. oxygen consumption (cc/min STPD)	
f. RE: respiratory exchange ratio	
g. Kcal: estimated total caloric consumption/day, computed from VO ₂ and RE	
B. Data Obtained by Correlation with Blood Gases:	
I. Ventilation and perfusion alterations	
a. Dead space, anatomical, alveolar (ml BTPS)	
b. Qs/Qt: intrapulmonary shunt fraction	
c. VA: Alveolar ventilation (l/min BTPS)	
d. VA/Qc: ratio of alveolar ventilation to pulmonary capillary blood flow	
II. Cardiac output (Fick principle) using VO ₂	
III. a. vascular resistance, systemic or pulmonary, using cardiac output and mean blood pressures	
b. Stroke volume and stroke work	
C. Data Summarized and Estimated	
I. 8 hourly summary of on-line and correlated data on each patient	
II. Estimation of blood gas tension using a ventilation/perfusion model	

TABLE II	
PROGRAM OPTIONS AVAILABLE AT EACH BED	
I. Fully automatic data acquisition from all occupied beds every 20 minutes: first priority	
II. One minute spot reading from any bed: second priority	
III. Bedside transducer calibration: every 24-48 hrs.	
IV. Special measurements:	
1. Vital capacity	
2. Functional residual capacity (Argon wash-in method).	
3. Forced expired volumes	
4. Diffusion (carbon monoxide method)	

exchange. Table 1 is a list of the routine data obtained by the system. Table II presents the program options available from each bedside. In practice, extensive on-line editing of received waveforms, stored constants, and computed results elim-

(Concluded on page 129)

Energy Metabolism In Sepsis And Trauma

High Cardiac Output In Sepsis Indicates Recovery While Low Cardiac Output Shock Is Fatal If Prolonged

By George H. A. Clowes, Jr., M.D.

All surgeons owe a debt of gratitude to Doctor Fiorindo A. Simeone for his teaching and fundamental research. Particularly is this true for those of us who in the past were associated with him as junior colleagues. Thus, it is a very real pleasure to participate in this symposium honoring Doctor Simeone. It also seems appropriate to summarize the results of recent investigations by my colleagues and myself on the abnormal energy metabolism in septic and post-traumatic states. Interest in this field stemmed from physiological measurements made in sick patients at the Cleveland Metropolitan General Hospital when Doctor Simeone was the Chief of Surgery in that institution. It was observed that patients who survive severe infection characteristically have low peripheral vascular resistances and maintain elevated cardiac indices in excess of 4 L/min/M² to satisfy the high circulatory demand.^{8, 9, 29} On the other hand the mortality of patients who are more than transiently hypotensive with cardiac outputs below the normal resting value is greater than 70 per cent.^{21, 26}

GEORGE H. A. CLOWES, JR., M.D., *Department of Surgery, Harvard Medical School, Sears Surgical Laboratory, Boston City Hospital, Boston, Mass.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

The research reported in this paper was supported by Grant No. GM 19954-02 of the U. S. Public Health Service.

Survival from serious trauma and infection, as well as from other major stresses, is dependent upon continued cellular conversion of body fuel substrates to usable energy in the form of high energy phosphate bonds. Failure to maintain energy production by cells in any part of the body leads to loss of essential functions and even to cell death in vital organ systems. Certain well known metabolic abnormalities of energy production accompany the septic and post traumatic states. Proteolysis and severe negative nitrogen balance far exceed the values observed in simple starvation.^{12, 16, 19} Characteristically marked wasting and weakness occur and may result in death. Impairment of protein synthesis is followed by failure of wound healing and loss of immunological competence.^{1, 5} A pseudodiabetic state accompanied by insulin resistance is typical of the seriously ill patient under these conditions.¹⁸ Lactacidemia is known to accompany inadequate tissue perfusion in the low cardiac output state, but it is also present to some degree in the high output state characteristic of patients who recover.²⁶ McLean et al,²¹ suggest that the prognosis of such serious illness is closely related to blood lactate values.

Not only does energy production in sepsis and trauma differ from the economic utilization of body fuel in uncomplicated starvation, but significant differences also exist in the high cardiac output pattern of recovery and in the low output shock state. The metabolic abnormalities are dependent

upon variations in secretion of endocrines as well as the state of the circulation. Furthermore, the experimental data make it appear that the induction of resistance to insulin in skeletal muscle is a major determinant of the metabolic alterations observed under these conditions.^{10, 28} Liver and adipose tissue evidently continue to respond normally to insulin.²⁷ Knowledge of the caloric requirements and the altered patterns of energy production in various tissues under these conditions point the way to effective supportive therapy designed to shift favorably the dynamic balance between injury and the protective responses which lead to survival and recovery of such very sick patients.

UTILIZATION OF FUEL SUBSTRATES

Before proceeding to a consideration of energy metabolism in sepsis and trauma it appears wise to review briefly the normal pattern of body fuel utilization in the fed and fasted state. The conversion of adenosine diphosphate (ADP) to adenosine triphosphate (ATP) involves the transfer of 7700 K calories per mole. Vast quantities of energy are derived from complete oxidative degradation of the available substrates: carbohydrate 4 K calories/gram, protein 4 K calories/gram, and fat 9 K calories/gram. In the absence of oxygen energy production is dependent upon the inefficient anaerobic degradation of glucose to lactate which yields but two molar equivalents of ATP compared to 36 produced in the tricarboxylic acid cycle of oxidation. The general pathways by which energy is extracted from the available fuel sources are outlined in Figure 1.

From a thermodynamic standpoint in a steady state except for a very small portion expended for external work and growth the energy employed by the body will appear as heat. Thus, it is possible by various types of measurements^{16, 19, 32} to express energy utilization as K calories/day. At rest the basal metabolic rate of a normal 70 Kg man is about 1800 K calories/day. To maintain vital processes during peritonitis or other widespread septic processes 2200 to 2800 K calories/day are required. Fever only in part accounts for the elevated metabolic rate after or in sepsis. Kinnéy and Roe and their colleagues^{20, 25} observed that energy expenditure considerably exceeds that predicted for a given body temperature. The Du Bois formula¹⁴ states that the metabolic rate rises only about 7 per cent for each degree Fahrenheit of body temperature elevation. This apparent discrepancy is only in part explained by augmented work of respiration.⁸ Much greater expenditures of energy are encoun-

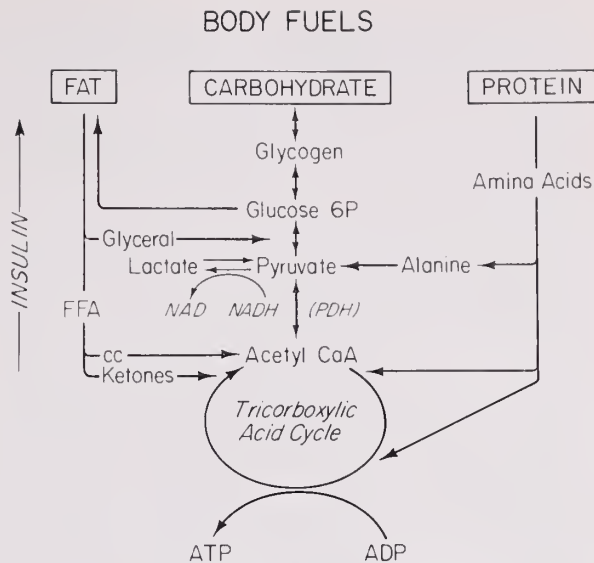


Figure 1. Body fuel substrates: routes of mobilization and storage.

tered in situations when large evaporative heat losses are present (0.512 K cal/ml of water evaporated). In extensive burns it is not unusual for a patient to require 4000 K cal/day or more to remain in balance.

In the absence of exogenous caloric intake the metabolism becomes dependent upon stored energy. In a normal adult available body fuel includes glycogen about 200 grams, approximately 6 Kg of protein, and 15 Kg of fat in adipose tissue. In simple starvation carbohydrate is exhausted within a few hours. Approximately 75 grams per day of protein will be mobilized initially for conversion to carbohydrate for use by nervous tissue and blood cells. The remainder of the caloric requirement is derived from fat. As adaption to starvation progresses the quantity of protein mobilized is reduced to near 25 grams or less per day in a normal adult. Proportionally greater quantities of fat are utilized from free fatty acids (FFA) and ketones converted from FFA in the liver. Part of this change is related to progressively greater utilization of ketones by nervous tissues.⁷

The mechanism of this conversion to the economic utilization of caloric stores is dependent upon a progressive reduction of blood glucose. The circulating insulin falls from an overnight fasting value of 16 to 20 down to a value of 12 μ U/ml or less. Cahill⁶ described insulin as the "overall fuel control in mammals." Insulin normally suppresses lipolysis and promotes protein and glycogen synthesis. In starvation blood glucose declines from

(Continued on next page)

TABLE I
METABOLIC SUBSTRATES AND URINARY
NITROGEN EXCRETION IN FASTING AND
SEPTIC MAN

(Values \pm SEM)

NORMAL **SEPTIC SEMI-STARVATION**
(Glucose 100g/24^c)

12 HOUR FASTING n=10			
High Cardiac Output n=20			
10 PATIENTS			
Low Cardiac Output n=12			
8 PATIENTS			
Cardiac Index (L/min/m ²)	2.8 \pm 0.4	4.6 \pm 0.8	2.4 \pm 0.3
Mean Art. Pres. (mmHg)	93 \pm 14	110 \pm 12	70.2 \pm 4
Rectal Temp. (°F)	99.6 \pm 0.6	102.4 \pm 0.8	100.6 \pm 0.6
Blood Insulin (nU/ml)	18 \pm 2	42 \pm 6.4	12 \pm 4
Blood Glucose (mMol/ml)	3.6 \pm 0.8	7.2 \pm 0.5	7.68 \pm 2.3
Blood FFA (nMol/ml)	1.3 \pm .15	0.41 \pm .06	1.176 \pm 0.9
Blood Lactate (nMol/ml)	0.6 \pm 0.1	1.15 \pm .11	2.79 \pm 0.3
PaO ₂ (FIO ₂ =0.2) (mmHg)	90 \pm 3	65 \pm 6	55 \pm 8
Urinary N (gm/24 hrs)	6.1 \pm 0.9	7.4 \pm 0.9	16 \pm 2
*n=number of observations			

the initial fasting values of approximately 7 μ Mol/ml to less than half this value. Stimulation of insulin secretion then decreases. Fat is mobilized in greater quantities to furnish free fatty acids, glycerol, and ketones. The utilization of these substrates is proportional to their plasma concentration.

CLINICAL OBSERVATIONS IN SEPSIS AND TRAUMA

The contrast between the mobilization of body fuels in normal fasting man and the state of affairs in the high or low output septic situation is demonstrated by the data in Table I. Eighteen septic patients with peritonitis, retroperitoneal abscesses, or extensive gangrene admitted to the wards of the Boston City Hospital were selected for study. All had wound or peritoneal cultures containing coliform organisms. The cardiac outputs were measured by indocyanine dye dilution curves. Blood glucose, lactate, and glycerol were measured by standard enzymatic techniques.² Free fatty acids were determined by the method of Dole and Meinertz.¹³ Radioimmunoassay according to Soeldner³⁰ was used to measure blood insulin concentrations, using a port insulin standard. Urinary nitrogen was

measured by the micro-Kjeldahl technique or estimated by urine urea determination.

Of these patients ten were classified in the high cardiac output group with an average cardiac index of 4.6 ± 0.8 L/M²/min. Their average mean blood pressure was 110 ± 12 mm Hg. Eight patients in the low cardiac output group with an average mean arterial blood pressure of 70.2 ± 4 mm Hg had an average cardiac index of 2.4 ± 0.3 L/min/M². For comparative purposes measurements were made after an overnight fast in three normal volunteers and in eight patients after full recovery.

Attention is drawn to the fact that the body temperature of those patients in the low flow state were significantly lower, average of 38.1C (100.6 degrees F), when compared with those of the high flow group which averaged 39.1C (102.4 degrees F). This finding suggests that heat production was insufficient to keep pace with heat loss in the patients who were in shock. Cooling is recognized as a serious prognostic sign in severe sepsis.

The blood glucose in both groups of patients was approximately twice that of the fasting normal people. However, the average blood insulin in the high flow patients was 42 ± 6 μ U/ml compared to 18 ± 2 μ U/ml in the normal fasted state, and 12 ± 4 μ U/ml in the low flow patients. The blood free fatty acid was $1.3 \pm .15$ μ Mol/ml in the normal fasted people and 1.17 ± 0.8 in the low flow group of patients. On the other hand the plasma FFA was $0.41 \pm .06$ μ Mol/ml in the high output septic patients in whom lipolysis was suppressed by high blood insulin levels. Although lactic acidemia is present to some extent in both septic groups, the blood lactate concentration is significantly higher at 2.8 μ Mol/ml in the low flow patients. The urinary nitrogen secretion of 7.4 grams per day in the high flow patients was slightly higher than observed in the fasting normal patients which was 6.0 gm per day. However, in the low flow patients the nitrogen secretion was significantly higher (p less than .001) the average value being 16 ± 2 gm per day.

ANIMAL EXPERIMENTS

To examine in greater detail the metabolic abnormalities and altered enzyme pathways in liver, muscle, and adipose tissue two groups of experiments were conducted. Because of limitation of space the results will be summarized as they pertain to an understanding of the clinical metabolic responses.

The close resemblance of pigs to man in regard

to clotting and vasoactive peptides as well as the regulation of energy metabolism by insulin prompted the selection of these animals for detailed study of fuel utilization by various tissues under the stress of trauma and sepsis. The effects of starvation for four days were compared in each animal with the effects of peritonitis three days after cecal ligation. Hemodynamically significant differences were observed between starved (cardiac output $[CO] = 3.9 \pm 0.3$ L/Min) and septic states. The latter as in man was found to be differentiated into two patterns of response: high $CO = 5.0 \pm 0.6$ L/Min and low output $CO = 2.0 \pm 0.3$ L/Min. Again as with the patients the blood insulin concentration was found to be low (10 ± 4 μ U/ml) in starvation and very high (41 ± 9 μ U/ml) in the septic high output state (SHO). In the low output or septic shock state (SLO) the blood insulin value was only 14 ± 5 μ U/ml. Other measured parameters were in almost every respect similar to the values obtained from man given in Table I.

Hind Limb (Skeletal Muscle and Adipose Tissue) Metabolism: Measurements of blood flow and arteriovenous differences in the hind limb of intact starved and septic pigs by Doctor Thomas O'Donnell²² indicate that the peripheral blood flow was proportionate to the cardiac output. Glucose and oxygen uptakes by the limb were not significantly different between starvation, SHO, and SLO. However, in SLO virtually all glucose uptake by the extremity was converted to lactate and released into the venous blood. On the other hand in SHO lipolysis as measured by glycerol release was severely reduced, and the net FFA uptake by the hind limb was almost nil. FFA utilization approximated that of starvation in SLO. Calculations reveal that a fuel deficit existed in the extremity in both the SHO and SLO states. To satisfy the energy requirements of the limb muscle protein was mobilized. Since only the branched chain amino acids can be burned locally in the muscle, all other amino acids were released into the blood. Alanine constitutes a large portion of the amino acids transported from the muscle. Using alanine release as a marker, the magnitude of the protein breakdown can be estimated. Expressed as μ Mol of alanine/Kg body wt/minute the values released from muscle were: starvation = 0.9, SHO = 2.9, and SLO = 6.5. This phenomenon of peripheral proteolysis is reflected by the elevated urinary nitrogen excretion of the septic patients with high cardiac output (7.4 ± 0.9 gm/day) and the very high values (16 ± 2 gm/day) in those with low outputs.

Liver Metabolism: By a variety of techniques portal and hepatic artery blood flows* combined with blood sampling from these vessels and the hepatic vein my colleague Doctor Masayuki Imamura has been able to study liver metabolism in conscious pigs comparing the septic high (SHO) and septic low output (SLO) with the response to simple starvation. Liver oxygen consumption was elevated about 19 per cent in SHO and reduced 25 per cent in SLO. Although the net lactate uptake was reduced by 45 per cent in SLO, it remained the same as starvation in SHO. Alanine, a marker for amino acid and protein flux, was taken up by the liver in starvation at an average rate of 12 μ Mol/min/Kg body wt. In sepsis, alanine was taken up at a rate of 12 and 5.6 μ Mol/min/Kg release from the liver in starvation was 18, and in SHO was 23 μ Mol/min/Kg body wt., but was only 9 μ Mol/min/Kg body wt. in both SLO and starvation. Thus it becomes evident that hepatic gluconeogenesis continues normally in sepsis except in the low output state, and glucose production is principally at the expense of liver protein in starvation, gluconeogenesis in sepsis is dependent upon amino acids derived from the periphery. This finding accounts for the severe muscle and peripheral protein wasting in septic starvation. Furthermore, it is apparent that glucose production in the low output shock state is significantly less than in SHO.

Enzyme Energy Pathways — Differential Tissue Sensitivity to Endogenous Insulin Levels in the Normal Fed State, Fasting and in the Presence of Peritonitis: The tissue enzyme activity of skeletal muscle, adipose tissue, and liver of male white Charles River rats of 120 to 150 grams body weight were assayed in vitro in the fed state, and, for comparison, after three days of fasting, and after the induction of peritonitis by cecal ligation by my associate Doctor Thomas Ryan.²⁷ Blood insulin levels in the septic rats were three times that of the fasting controls and 155 per cent of the fed animals.

The increased circulating insulin was associated in the adipose tissue with a 310 per cent elevation of the tissue sensitive pyruvate dehydrogenase complex (PDH) and a three fold increase of conversion of glucose to CO_2 by fragments of epididymal fat pads in the infected animals compared to the fasted groups.

By contrast the diaphragm PDH in the septic animals was significantly reduced to 30 per cent of the fed animals despite the high circulating blood

(Continued on next page)

insulin. At the same time skeletal muscle conversion of radioactive glucose to CO_2 and glycogen were also significantly less in sepsis.

Active hepatic function in sepsis was indicated by maintenance of blood glucose concentration and increased urinary nitrogen excretion.²⁸ The activity of phosphoenolpyruvate carboxykinase in starvation was 87 per cent, and in the septic state as 15.6 per cent of the fed animals. Liver glucose-6-phosphatase activity rose 76 per cent in fasted and 35 per cent in septic animals. Glucokinase activity was reduced, but hexokinase was increased 38 per cent in the infected animals. As an indication of the need for maintenance of liver energy production by aerobic glycolysis in the face of reduced FFA in sepsis liver PDH was 76 per cent higher in sepsis than in starvation.

DISCUSSION AND CONCLUSIONS

The abnormal energy metabolism of sepsis, particularly in regard to proteolysis, falls into two distinct patterns: (1) that which accompanies the high cardiac output commonly observed in those who do well and recover, and (2) the low cardiac output shock state which is fatal is prolonged.

The high resting blood insulin values observed in the patients with the hyperdynamic circulation as well as the diabetic-like glucose tolerance observed in septic patients⁵ points to insulin resistance. The data presented above suggest that the site of insulin resistance is principally located in skeletal muscle, since liver and adipose tissue appeared to respond normally to insulin stimulation. The failure of insulin to induce pyruvate dehydrogenase synthesis in muscle confirms this concept. Furthermore, since pyruvate dehydrogenase is a rate limiting enzyme complex in the conversion of pyruvate to acetyl Co A, an explanation is offered in part for the lactic acidemia which occurs even in certain of the high output septic patients. Thus, one is led to the hypothesis that, whatever the cause, muscle insulin resistance may be a protective phenomenon to assure adequate glucose production. Because of the reduced free fatty acid and ketone availability associated with insulin induced lipogenesis and reduced lipolysis, an energy fuel deficit appears to exist in muscle, which can only be satisfied by the local combustion of amino acid derived from muscle protein. Since only the branched chain amino acids can be oxidized in muscle, others including alanine, glycine, and glutamine must be transported to the liver for deamination and conversion to glucose. Data from the stud-

ies on liver suggest that in the high output state glucogenesis is stimulated. If, as suggested by Rocha and his colleagues,²⁴ alanine is a stimulus to the pancreatic alpha cells to secrete glucagon, the hepatic glucogenic mechanism is secondarily stimulated. The resulting excessive glucose production in turn stimulates insulin secretion by the pancreatic beta cells accounting for the high blood insulin levels of sepsis despite continued?????c

Based upon information of this nature Doctor George Blackburn,^{3, 4} one of my associates, suggested that elimination of glucose infusion in septic patients might avoid to some degree the excessive insulin stimulation and suppression of lipolysis. He observed that the intravenous infusion of a 3 per cent isotonic amino acid solution* to deliver 90 grams of amino acids/24 hours resulted in lesser insulin stimulation and greater mobilization of free fatty acid. Blood FFA rose from 0.4 to 1.1 $\mu\text{Mol/ml}$ and ketones increased from 0.1 to 1.2 $\mu\text{Mol/ml}$ on the average. Thus, the metabolic utilization of body fuel more closely resembles the economic pattern of simple starvation.⁷ Blood insulin fell from 46 to 26 $\mu\text{U/ml}$. The patient then burned more of his own fat, and protein was spared. Negative nitrogen balances as great as 10 grams/day were reversed by this treatment.³ Under other circumstances when body fat has been depleted and the gastrointestinal tract is nonfunctional, it becomes necessary to resort to the full hyperalimentation regime as recommended by Dudrick and his associates¹⁵ to furnish calories as well as amino acids. This concept of protein sparing by limiting insulin secretion is of equal importance in dealing with alimentation via the gastrointestinal tract when absorptive capacity is limited because of ileus or a short gut. Randall and his colleagues^{23, 31} have demonstrated the effectiveness of "elemental diet" which contains both amino acids and carbohydrate.

The state of affairs in the low cardiac output patients is an entirely different story. Here as in other shock states¹⁷ insulin secretion is inhibited by the presence of catecholamines and probably by reduced perfusion of the pancreas. The muscle energy fuel deficit in the low output septic state also is of greater severity. Free fatty acid is available, but because of somewhat reduced oxygen availability and probably low muscle pyruvate dehydrogenase activity, almost all glucose is converted to lactate with greatly reduced energy release. The high negative nitrogen balance in the low output septic patients, average 16 grams per

(Continued on page 129)

Phleborheography

New Non-Invasive Method Of Diagnosing Deep Venous Thrombosis Of Lower Extremity Is Highly Accurate

By John J. Cranley, M.D.

Phleborheography is defined as the tracing of moving currents within a vein, and was considered to be an appropriate term to designate a plethysmographic technique for the diagnosis of deep venous thrombosis of the lower extremity recently described.¹ This technique is practical, is highly accurate, and has become a standard clinical test (Fig. 1).

CONCEPTUAL DEVELOPMENT OF PHLEBORHEOGRAPHY

Our interest in this subject was aroused by Wheeler's²⁻⁵ work with the impedance plethysmograph. A visit to his laboratory impressed us with the physiologic soundness of the principles involved, and consultation for the purpose of investigating this problem further was sought with Simeone and Grass.¹ In previous collaboration⁶ we had considered the impedance technique, but our deliberations led to the choice of mechanical plethysmography. Our present review of the possible techniques for measuring changes in volume of limbs and digits again led to the same conclusion.⁶ It seemed desirable to attempt to measure venous bloodflow from

the limb in health and in extremities with deep venous thrombosis. It was anticipated that the classic plethysmographic boot would be used for relating volume changes of the limb to the volume changes of the part being measured and to measure changes in limb volume on elevating the extremity or after release of a proximal venous tourniquet. The boot proved to be unwieldy, and elevating the limb for emptying the veins and lowering it for filling them caused excessive artifacts in the highly amplified recording. The method finally evolved proved to be quite different from our original concept, but has proved highly satisfactory to date.

METHOD

The patient lies quietly in bed with the head of the bed elevated so that the body is at an angle of 12 to 15 degrees from the horizontal (Fig. 2). By lying quietly in bed the artifacts are reduced, and by maintaining the limbs below heart level the veins are distended, thus making their caliber more uniform and the transmission of impulses more effective. Modified blood pressure cuffs are used to encircle the limb, and two are used interchangeably to record volume changes and to act as a pump. The pumping and recording cuffs in use today are half the size of those originally reported (2 x 7 in).¹ An encircling bellows is placed around the upper abdomen to record respiratory waves. One of the recording cuffs is placed around the lower third of the thigh. The second is placed just below the knee.

(Continued on next page)

JOHN J. CRANLEY, M.D., *Director of Department of Surgery and Director of Medical Education, Good Samaritan Hospital, Cincinnati, Ohio, Director, Kachelmacher Memorial Laboratory at Good Samaritan Hospital.*

Presented at Symposium in honor of Dr. Fiorindo A. Simeone at Brown University, Providence, Rhode Island, June 14, 1974.

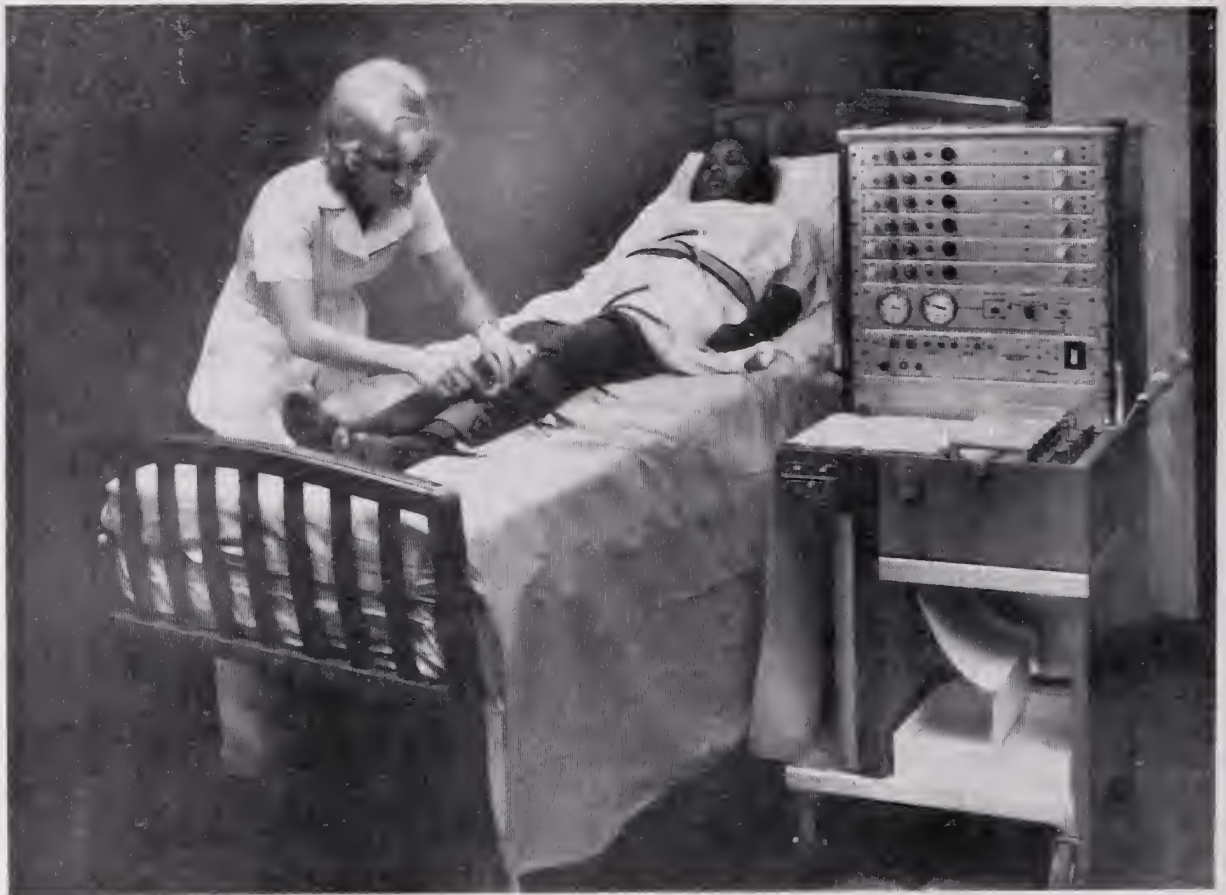


Fig. 1. Test being performed. Note that the patient's legs are below heart level. The instrument is the first model phleborheograph.

The third is placed just inferior to this on the bulge of the calf. The fourth is placed just below the third at the junction of the gastrosoleal bulge, and the fifth is placed on the foot. The two most distal recording cuffs are also used to apply 50 mm Hg of pressure to the calf or foot. The tracings will show respiratory waves, pulse waves (which are ignored), and changes in the volume of the part as produced by application of pressure. By passively compressing muscle and soft tissue, the physiologic effects of walking are produced while the patient's limbs are motionless, thus reducing the artifacts.

PRINCIPLES INVOLVED

I. *Reduction of Respiratory Waves in Deep Venous Thrombosis*

The respiratory waves are measured directly by a bellows that encircles the upper abdomen. These waves are reflected in the tracings of the thigh and leg, and occasionally the foot, while the patient is lying in bed. In the presence of acute venous thrombosis the respiratory waves will disappear (Fig. 3) and will recur in approximately 2 weeks. At this

time, however, they will be smaller and more rounded rather than peaked as would be the case in the normal extremity (Fig. 4). It is both interesting and important to note that in a patient with femoroiliac thrombophlebitis the respiratory waves will be completely absent in the thigh (Fig. 5) but may still be visible in the leg if the veins of the leg are patent. It appears that the respiratory influence passes down the limb through the collateral veins. At times, for example, one can see normal respiratory waves in the upper third of the leg and in the lower third, and still they will be absent in the middle of the leg just at the site of the thrombosis. It seems certain to us that much more remains to be learned about these respiratory waves; but for the purposes described here they represent a highly accurate test for the patency of the venous tree. It does require experience to detect the difference between a very small respiratory wave and absence of respiratory waves. Sometimes this distinction can be clarified by asking the patients to breathe more deeply (Fig. 6). Large respiratory waves may

appear in the foot of a patient with a postphlebotic extremity where recanalization has taken place.

II. *Intermittent compression of the extremity propels blood proximally just as active muscular contraction does on walking. A recording cuff placed proximal to the site of compression will detect the momentary damming up of blood if its exit is blocked by venous throm-*

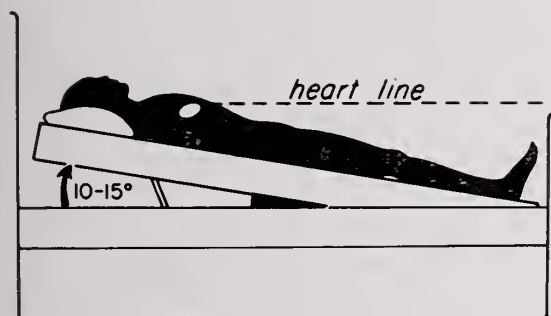


Fig. 2. Diagram showing angle of the bed during test.

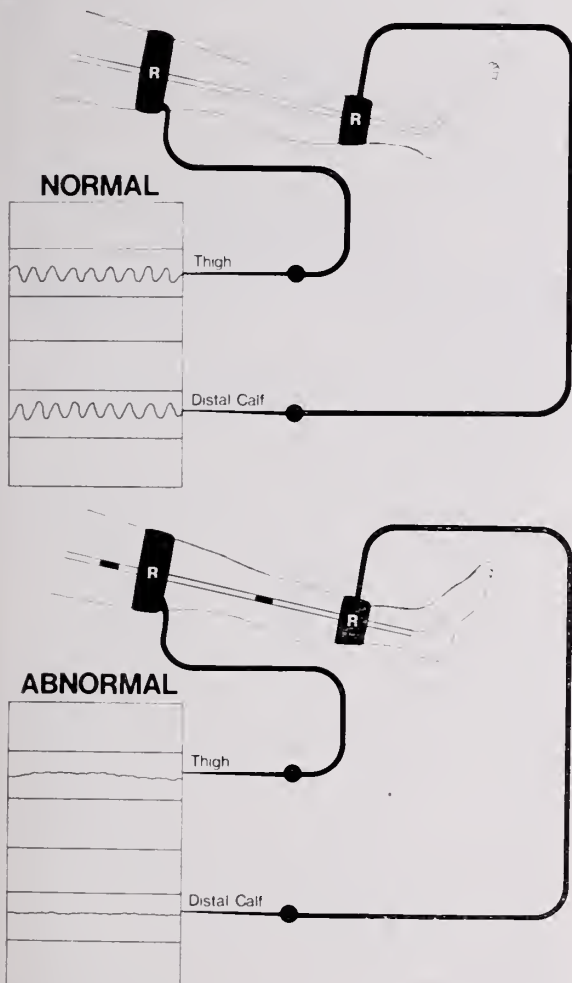


Fig. 3. Diagram showing normal respiratory waves (above) that disappear in the presence of deep venous thrombosis (below).

basis or extraluminal venous compression. This is evidenced by an abrupt rise in baseline of the volume recorder. Similar compression in the normal extremity with unimpeded venous outflow does not affect the level of the baseline.

(Continued on next page)

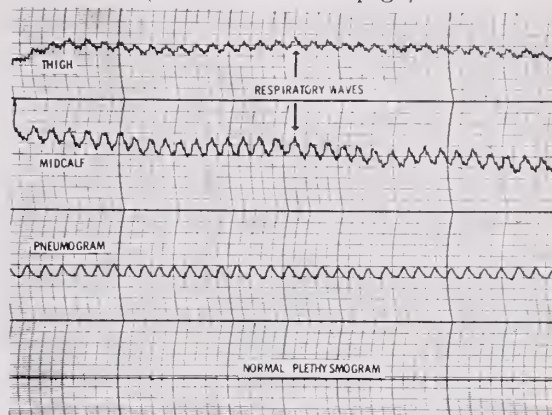


Fig. 4. Tracings showing presence of respiratory waves. The instrument used was the Grass polygraph.

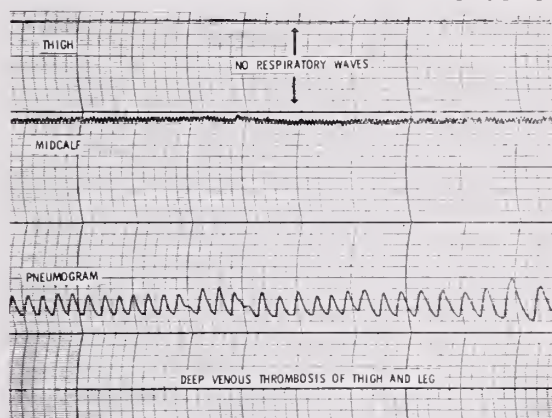


Fig. 5. Tracings showing absence of respiratory waves. The instrument used was the Grass polygraph.

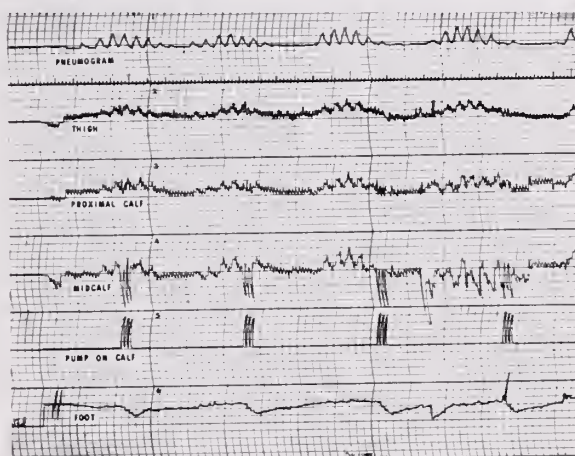


Fig. 6. Tracing showing Cheynes-Stokes respiration. Note the respiratory waves in the thigh, proximal and midcalf that disappear when the patient stops breathing and that recur as he breathes deeply. (The instrument is the phleborheograph.)

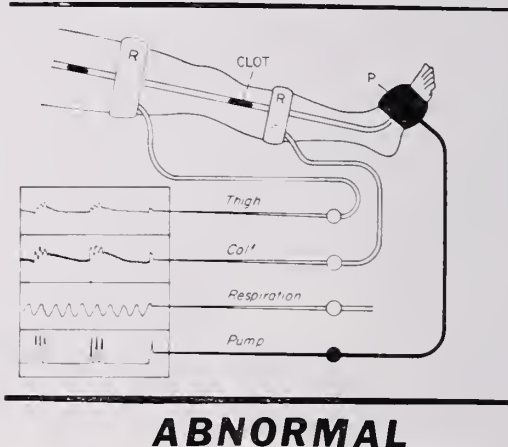
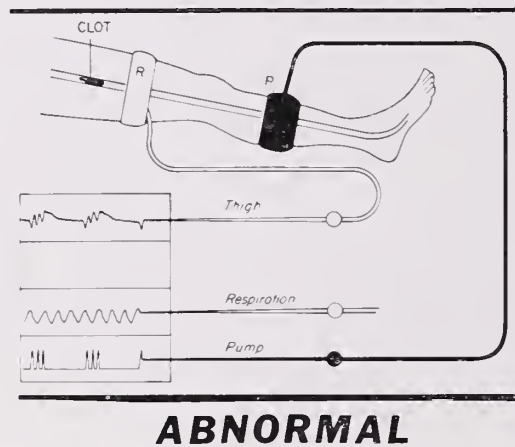
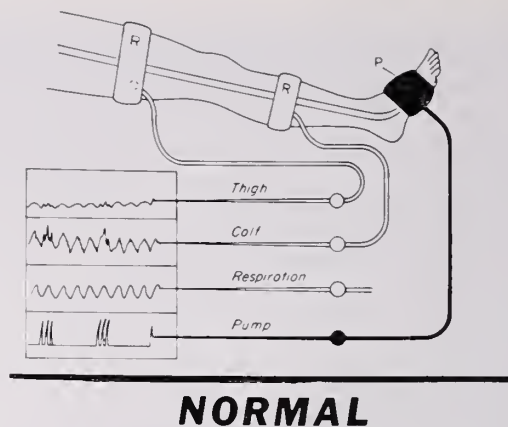
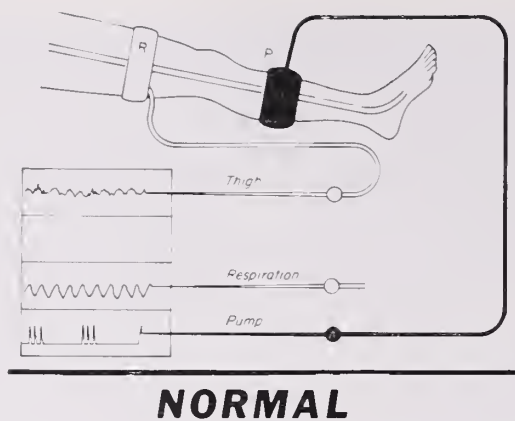


Fig. 7. Sketch to show pumping cuff on the mid-calf. Normal limb (above) and limb with clot in femoral vein (below) as evidenced by rising baseline. ..

Fig. 8. Sketch to show pumping cuff on foot. Normal limb (above) and clot present in femoral and popliteal veins (below) as evidenced by rising baseline.

No matter how many times the normal calf, leg, or foot are compressed the baseline will remain level (Fig. 7). One may detect jiggling of the baseline from the transmission of the pressure or slight movement of the extremity but the baseline does not rise. However if there is any obstruction to the flow of venous blood above the recording cuff, then compression distally will cause a step-wise rise in the baseline (Fig. 7 bottom). Thus, if the thigh recording shows a step-wise rise while the calf is being compressed, one knows there is obstruction to the deep venous system above the thigh cuff. This is occasionally due to external compression, but otherwise indicates intraluminal thrombosis. Similarly, compression of the foot will cause a rise in baseline of the recordings taken in the leg (Fig. 8), if there is any obstruction at or above the recording cuffs. When positive, this is the most accurate index of venous obstruction and we know of no exceptions. In practice, 50 mm Hg of pressure is applied 3 times in rapid succession to simulate squeezing of the calf with the hand or dorsi- and

plantar flexion of the foot. If the clotting is limited to the leg, the thigh cuff will show no rise in baseline as the foot is compressed.

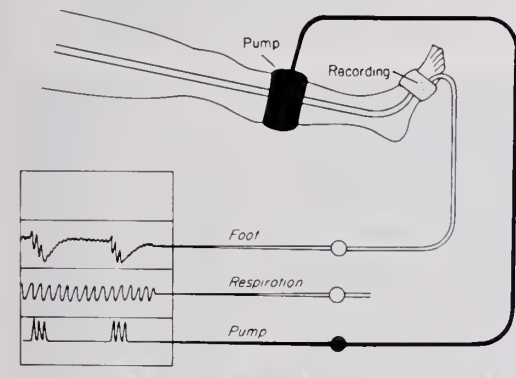
III. Compression of the calf will not only propel blood up the unobstructed extremity but will also suction some blood out of the normal foot.

Thus, a recording cuff on the foot will show a fall in baseline when the calf is compressed (Fig. 9). When this was reported, we were not aware of the work of Sakaguchi et al, in Tokyo,⁷⁻⁹ who made this same observation. This maneuver is the least sensitive of the three and is most subject to artifact and error. For example this test may be positive in the limb of the patient with lymphedema and in many instances is equivocal. The major reason for not discarding it entirely is simply the fact that, when the limb is normal, venous patency is easily recognizable at a glance from this tracing. Furthermore, the elimination of artifacts that in large part are responsible for its seeming lack of specificity

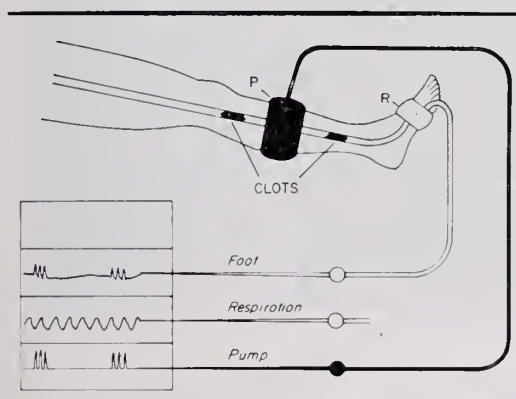
now appears a reality with the development of an instrument uniquely designed to diagnose deep venous thrombosis. For mass screening this maneuver can be carried out in a few minutes, and examination of the tracing will frequently disclose three criteria of a normal venous tree, thus eliminating the need for further testing. For example, in the normal extremity one will immediately recognize the presence of respiratory waves in the thigh, calf, and foot; absence of a rise in the baseline of the thigh as the calf is compressed; and normal emptying of the foot as the calf is compressed. On the basis of these three findings one can be certain that the venous drainage of the limb is normal.

TECHNICAL POINTS

The recording cuffs contain a small amount of air at 10 mm Hg in order to effect good coupling with the limb.



NORMAL



ABNORMAL

Fig. 9. Sketch to show a fall in baseline of the normal limb when the calf is compressed, thus suctioning some blood from the normal foot (above). In the abnormal limb (below) blood is not suctioned from the foot with compression of the calf, since the veins below and above the calf are obstructed by clot.

When applying the cuffs (See Fig. 1) the strapping is placed posteriorly and the bladder or recording portion is placed anteriorly. If the bladder is placed under the limb, the pressure of the limb on the bladder will produce large artifacts.

The pumping cuff must be applied carefully and must not be made of glossy material, lest it move on the limb as the pressure is applied and produce artifacts.

The patient must lie still. Movement or talking will produce artifacts. The technician should continue the tracing until clear responses are obtained. If any questionable responses or artifacts are noted, the technician merely continues the tracing, only making certain that the pens have time to return to the baseline after each maneuver.

ARTIFACTS

The most frequently encountered artifact is one of venous occlusion by extension of the leg at the knee. This artifact has been noted in phlebograms^{10, 11} and by those using the Doppler⁵ and impedance¹² techniques. Accordingly, the technician recognizes the positive tracing and repeat the maneuver with the knee flexed slightly (Figs. 10, 11). It would be desirable to study all patients with the knee slightly flexed to avoid this artifact; but as yet we have not found a convenient, practical, or comfortable method for the majority of patients to lie with the knee flexed without producing more artifacts. Artifacts produced by deep breathing or breath-holding are easily detected by the pneumogram.

INTERPRETATION

When the entire tracing is inspected, and the re-
(Continued on next page)

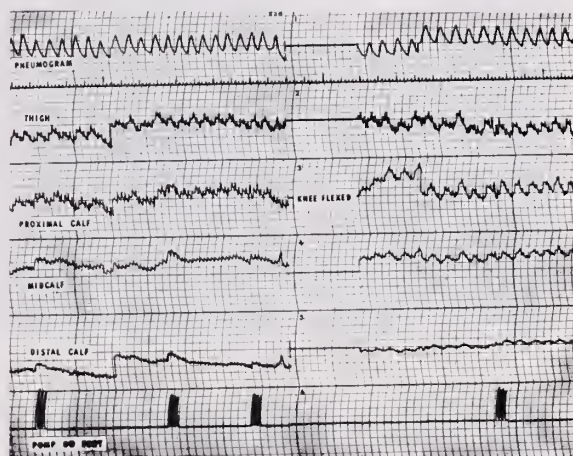


Fig. 10. Artifact of the straight knee. RUN 1. Note the rise in baseline and diminished respiratory waves on the side of the tracing when the knee is straight. However, when the knee is flexed, as is shown on the right side of the tracing, there is no rise in baseline and respiratory waves are clearly visible.

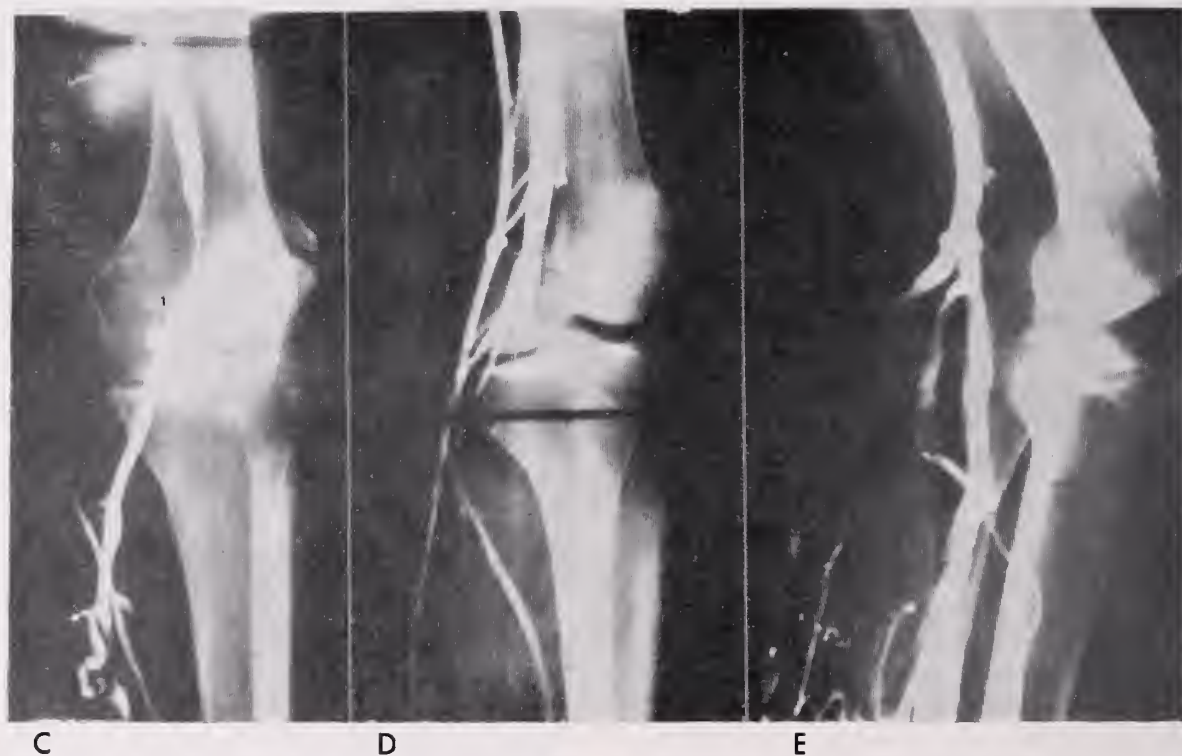
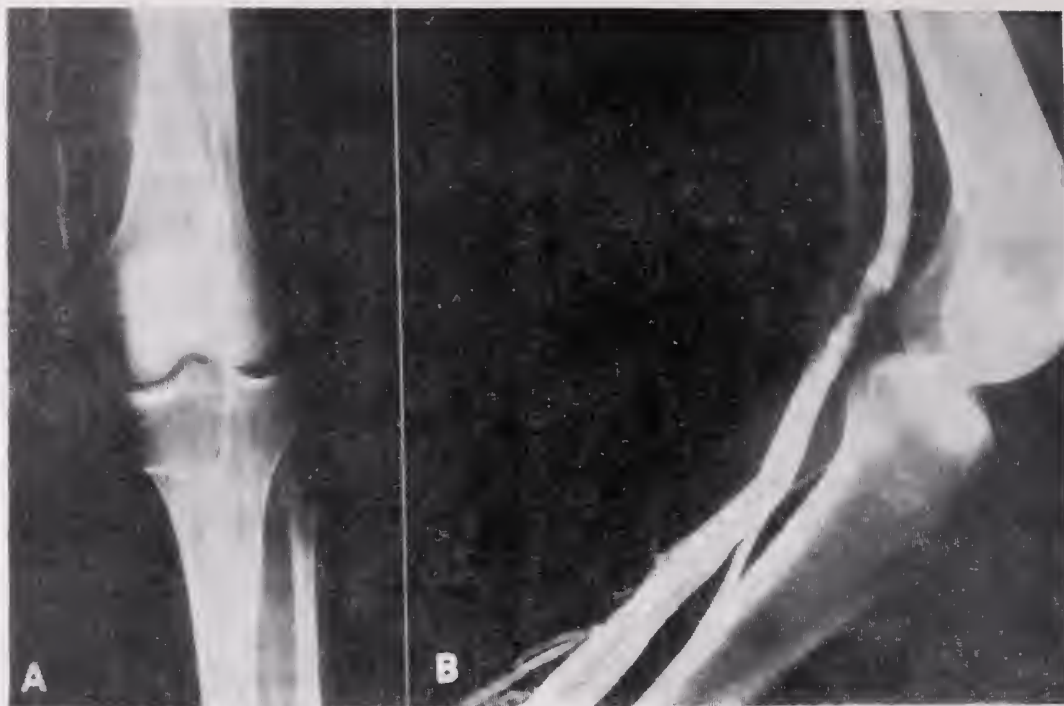


Fig. 11A. A 36-year-old female with clinical evidence of superficial thrombophlebitis. On supine examination with the leg extended there is failure to visualize the deep venous system below the level of the femoral condyle, simulating deep venous thrombosis. —B.—A patient femoropopliteal system is readily opacified in the lateral examination with the leg flexed.

Fig. 11 C, D. A 19-year-old female with unilateral leg edema. Deep venous thrombosis was considered when anteroposterior supine and attempted lateral recumbent studies, both with the legs extended, showed no filling of the deep venous system.

E. A third injection in the same patient in the lateral position and with slight flexion of the knee results in good delineation of normal deep venous structures.

BY PERMISSION OF: ARKOFF, et al. *Radiology* 90, 1968.

sponses to all three maneuvers are weighed, the diagnosis can be made in most patients (See Tables 1, 2 statistical data).

EFFECT OF DEEP BREATHING

At the end of the test the patient is asked to take several deep breaths. One frequently notes a rise in baseline in the presence of deep venous obstruction and a horizontal or declining baseline in a normal subject. Although a confirmatory sign, this maneuver is not necessary.

LIMITATIONS

This test cannot be performed in the patient whose lower extremity is in a long-leg cast, nor can it be done satisfactorily in a patient with coarse tremors. In elderly patients who are restless it is at times difficult to carry out. In these instances a mild sedation may be used.

Only thrombi in the mainstream of the venous return are detected by the phleborheograph, and clots in the tributaries and small veins are not discovered. Isolated clots in the deep femoral, saphenous, and hypogastric veins, as well as clots in the soleal veins, would not be expected to produce positive tracings (Fig. 12).

RESULTS

In February, 1974 a multi-channel phleborheograph specifically designed for diagnosing deep venous thrombosis became available and replaced the standard Grass polygraph in our laboratory on which our tests were carried out during the exploratory period from late 1971 to early 1974. From

TABLE I
PHLEBOGRAPHIC CORRELATIONS: 463
EXTREMITIES

	Polygraph	Phleborheograph
False Negative	13/127(10%)	1/12(8.5%)
Equivocal	2(1.6%)	0
Physician Error	4(3.2%)	0
Test Error	7(5.5%)	1(8.5%)
Pelvic-Knee Thrombi		
8/34(24%)		
False Positive	13/294(4.5%)	0/20
Equivocal	2(0.7%)	0
Artifact	3(1.0%)	0
Physician Error	3(1.0%)	0
Test Error	5(1.7%)	0

TABLE II
GARSS POLYGRAPH vs. PHLEBORHEOGRAPH

	Polygraph	Phleborheograph
Clinical Tests	2,245	636
Positive	296(13%)	83(13%)
Negative	1,929(86%)	546(86%)
Equivocal	20(1%)	7(1.2%)

recent experience with this new instrument we are confident that the results of phleborheography (Table 1), which already compare favorably with other standard diagnostic tests for venous thrombosis, are certain to improve because of the high degree of standardization of the technique not possible earlier. Errors traceable to artifacts have been markedly reduced. False-positive tests have been virtually eliminated. Interpretation has become freer of ambiguities. The major remaining problem is the difficulty of diagnosing small clots, particularly those that are non-occlusive, that occur in one or two of the veins below the knee. In this group false-negative tests by phlebography have numbered approximately 25 per cent in the past. The phleborheograph fails to detect them easily because they do not cause sufficient obstruction to the flow of venous blood due to their small size. Attempts are in progress to solve this problem by increasing the sensitivity of the technique.

(Continued on next page)

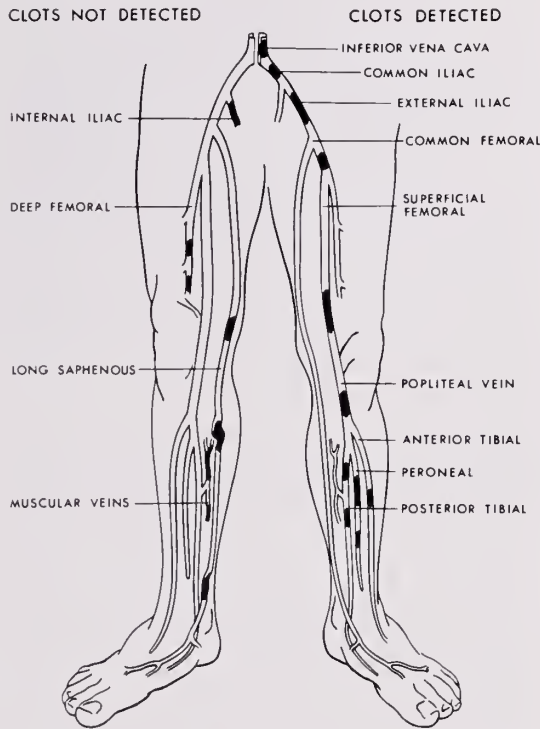


Fig. 12. Limitations of phleborheography. Diagram shows clots detected and not detectable. Only thrombi in the mainstream of the venous return are detected; clots in tributaries and small veins are not disclosed. Isolated clots in the deep femoral, saphenous, and hypogastric veins, as well as clots in the soleal veins, are not diagnosed by the tracings. BY PERMISSION OF HARPER & ROW.

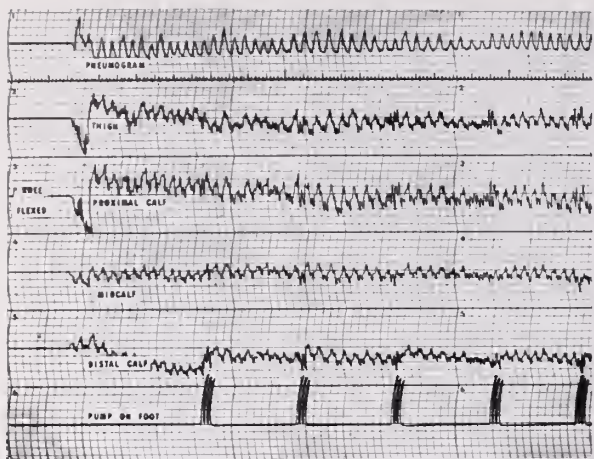


Fig. 13. Normal tracing. RUN 1. Large respiratory waves are clearly visible and sharply pointed in the thigh, proximal calf, midcalf, and distal calf. Larger waves are frequently noted in the proximal and midcalf than in the thigh; this is believed to be due to more efficient coupling between the cuff and the leg. This is also true of oscillographic readings. Note that when pressure of 50 mmHg is applied to the foot there is no rise in the baseline of any of the tracings.

PHLEBORHEOGRAPHY-PHLEBOGRAPHY CORRELATIONS

False-Negatives — While less exact than phlebography in detecting the presence of small clots in the minor veins below the knee, phleborheography has the advantage that it can be repeated daily, or more frequently, if called for, and therefore provides the physician with an unsurpassed clinical tool for making the diagnosis and following the progress of the patient with deep venous thrombosis of the lower extremity (Figs. 13 through 18).

As shown in Table 1, phleborheography was carried out on 127 extremities in which deep venous thrombosis was detected by phlebography. The phleborheogram was positive in 114, leaving a gross error of 13 (10 per cent). All of the 7 true errors reflected a small thrombus in one vein and its tributaries below the knee. There have been no false-negatives whenever two of the major veins below the knee have been involved, and none with any thrombosis of the popliteal, femoral, external iliac, or common iliac veins, or the vena cava.

False-Positives — There have been 294 extremities that have had a negative phlebogram in which a phleborheogram was also obtained; 281 of the latter were negative, leaving an error of 13 (4.5 per cent). Three of these errors were due to the straight leg compression of the popliteal vein (see above under Artifacts); all three tests became negative when repeated with the knee flexed. In one other extremity this was believed to be the

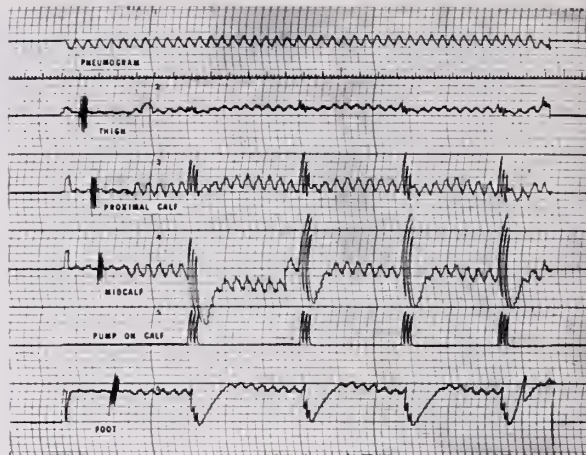


Fig. 14. Normal tracing. RUN 2. Pressure is being applied to the lower calf. Note emptying of the foot; 0.35 ml of blood is evacuated from the foot under the cuff. Normal equals 0.3 ml with the size of cuff currently in use. Similar emptying can be noted in the midcalf. Note the absence of rise in baseline of midcalf, proximal calf or thigh. Also note large respiratory waves that are visible in thigh, proximal calf, midcalf, and even in the foot. Large respiratory waves visible in the foot are seen in postphlebotic limbs, and in some normal limbs. In the postphlebotic limb, however, the filling time of the foot is shorter and there is usually some rise in the baseline tracing of the calf or thigh indicating some degree of obstruction.

cause of error, but it was impossible to prove it by repeat testing.

Non-Thrombotic Obstruction — There were 6 positive tests in extremities in which no evidence of venous compression was present. In two, there was compression of the left common iliac vein by the right iliac artery;¹³⁻¹⁴ in one compression of the right common iliac vein by metastatic tumor. All three of these were demonstrated by phlebography. There was also one patient in this group in the last trimester of pregnancy with hydramnios. Her phleborheogram was found to be intermittently positive when she would lie on her back and would revert to normal when she would lie on her side.¹⁵⁻¹⁶ One false-positive was found in a patient with great swelling of the entire extremity, cardiac decompensation, cirrhosis, and a functioning splenorenal shunt. The patient had a very high venous pressure. It is interesting that this test reverted to normal when the patient's heart became compensated.

One patient was studied prior to taking down an artificially created A-V shunt in the femoral artery.¹⁷ The phleborheogram was positive, which was considered to be reasonable due to the high venous pressure. However, at operation we were surprised to find complete fibrosis of the portion of the vein anatomically proximal to the A-V fistula.

CLINICAL TESTING

In addition to the above, the test has been positive in 296 (13 per cent) of 2,245 extremities that were believed to have deep venous thrombosis.

It was not possible to obtain phlebograms on these extremities and so they are considered in a separate group. As of this review, 1,348 normal extremities have been studied, and in all of these, the phleboreograms were negative.

The test has been used clinically in 137 office patients, not included in the above statistics. Occasionally it has not been possible to interpret the initial tracing, but almost invariably on repeat testing these tracings have become clear. It is impossible to say whether or not errors have been made in this clinical group; but at least, no proven errors have been brought to our attention.

SPECIAL STUDIES WITH THE PHLEBORHEOGRAPH

A group of 26 pregnant women in the third tri-

mester has been studied; all were negative, with the exception of a patient with hydramnios (see above) whose test repeatedly was positive while she was lying on her back and negative when lying on her side.

Forty-seven patients with inferior vena cava ligations were studied at an average of 9 years post-operatively; 77 per cent of thigh tracings were normal, a finding interpreted to indicate that minimal or no obstruction exists to the outflow of blood from the thigh veins through the pelvis or abdomen. Of the leg tracings, 65 per cent were abnormal. This finding indicates residual obstruction in the veins at and below the knee level.¹⁸

Avenues of future investigation include phleboreographic quantification of the postphlebotic lower extremity utilizing a slight modification of the present technique, by means of which the postphlebotic limb (Fig. 19) is readily identifiable by certain criteria, namely, the rise in baseline due

(Continued on next page)

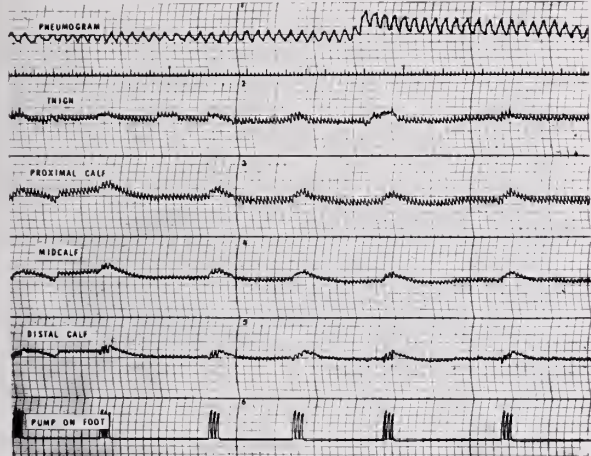


Fig. 15. Acute deep venous thrombosis. Demonstrates rise in baseline when pressure is applied to the foot, and the absence of respiratory waves.

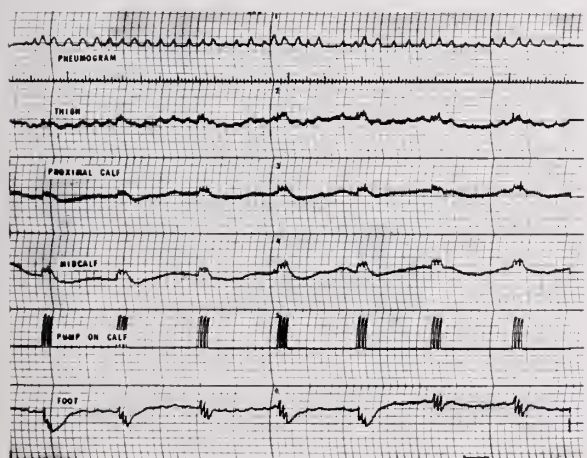


Fig. 16. Acute deep venous thrombosis with some visible respiratory waves.

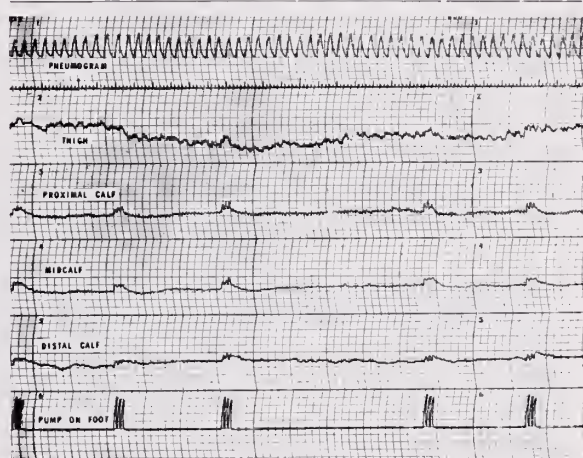


Fig. 17. Another tracing showing acute deep venous thrombosis.

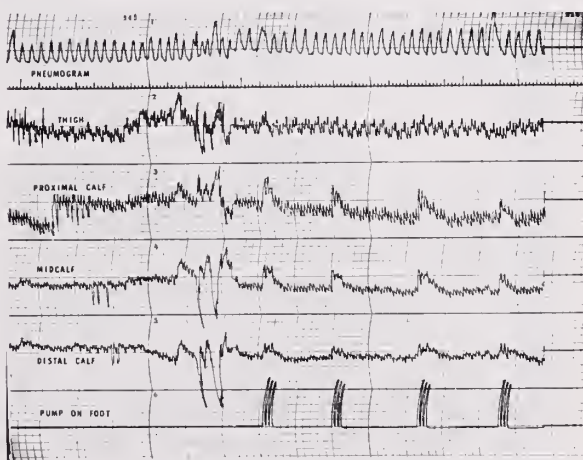


Fig. 18. Acute deep venous thrombosis of the leg i.e., below the cuff on the thigh. (RUN 1.)

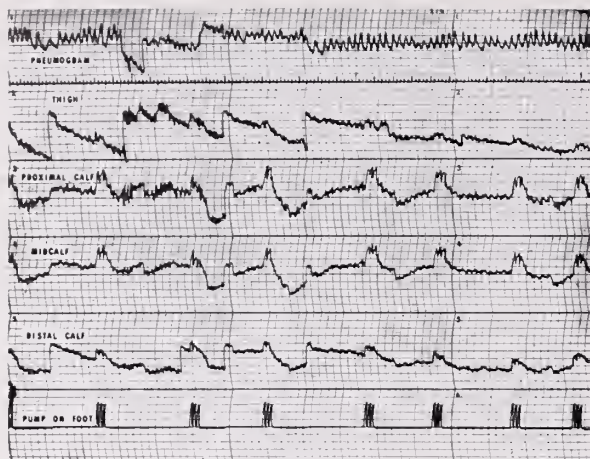


Fig. 19. Postphlebotic syndrome. Tracing shows obstruction in the presence of respiratory waves.

to an obstructed vein; the presence of large respiratory waves; and rapid filling of the foot (indicating absence of venous valves), following emptying secondary to calf compression. Conversely, delayed filling of the foot is observed after compression of the calf in patients with obliterative arterial disease. Rheographic investigative studies are projected for patients seen in the arterial laboratory pre- and postoperatively, as well as those managed conservatively. Also on the agenda is the continued development of techniques for study of thrombotic problems of the upper extremity.

SUMMARY AND CONCLUSIONS

Phleborheography is a new non-invasive highly accurate method of diagnosing deep venous thrombosis of the lower extremity. It is performed by a technician in the laboratory, at the bedside, or in the office. Interpretation of the tracings may be quickly learned by a physician.

The principles involved and illustrative examples are presented. Phleborheography offers a practical method of diagnosing deep venous thrombosis of the lower extremity.

REFERENCES

- ¹Cranley JJ, Gay AY, Grass AM, et al.: A plethysmographic technique for the diagnosis of deep venous thrombosis of the lower extremities. *Surg Gynecol Obstet* 136:385-94, Mar 73
- ²Mullick SC, Wheeler HB, Songster GF: Diagnosis of deep venous thrombosis by measurement of electrical impedance. *Am J Surg* 119:417-22, Apr 70
- ³Wheeler HB, Mullick SC: Detection of venous obstruction in the leg by measurement of electrical impedance. *Ann NY Acad Sci* 170:804-11, 1970
- ⁴Wheeler HB, Pearson D, O'Connell D, et al.: Impedance phlebography: technique, interpretation, and results. *Arch Surg* 104:164-9, Feb 72

- ⁵Wheeler HB, Mullick SC, Anderson JN, et al.: Diagnosis of occult deep vein thrombosis by a non-invasive bedside technique. *Surgery* 70:20-8, Jul 71
- ⁶Simeone FA, Cranley JJ, Grass AM, et al.: An oscillographic plethysmograph using a new type transducer. *Science* 116:355-7, 3 Oct 52
- ⁷Sakaguchi S, Tomita T, Endo I, et al.: Functional segmental plethysmography: a new venous function test. (Preliminary report). *J Cardiovasc Surg* 9:87-98, Jan-Feb 68
- ⁸Sakaguchi S, Tomita T, Endo I, et al.: Functional segmental plethysmography. Clinical application and results. *Angiology* 21:714-23, Dec 70
- ⁹Sakaguchi S, Ishitobi K, Kameda T: Functional segmental plethysmography with mercury strain gauge. *Angiology* 23:217-35, Mar 72
- ¹⁰Arkoff RS, Gilfillan RS, Burhenne HJ: A simple method for lower extremity phlebography—pseudo-obstruction of the popliteal vein. *Radiology* 90:66-9, Jan 68
- ¹¹Britton RC. In Schobinger RA, Ruzicka F, editors: *Vascular Roentgenology*. New York, Macmillan Co., 1964. Pp. 658-61
- ¹²Sigel B, Popky GL, Wagner, et al.: A Doppler ultrasound method for diagnosing lower extremity venous disease. *Surg Gynecol Obstet* 127:339-50, Aug 68
- ¹³Cockett FB, Thomas ML: The iliac compression syndrome. *Brit J Surg* 52:816-21, Oct 63
- ¹⁴Cockett FB, Thomas ML, Negus D: Iliac vein compression — Its relation to iliofemoral thrombosis and the post-thrombotic syndrome. *Brit Med J* 2: 14-9, 1 Apr 67
- ¹⁵McRoberts WA: Postural shock in pregnancy. *Am J Obstet Gynecol* 62:627-32, Sep 51
- ¹⁶Howard BK, Goodson JH, Mengert WF: Supine hypotensive syndrome in late pregnancy. *Obstet Gynecol* 1:371-7, Apr 53
- ¹⁷Cranley JJ: *Vascular Surgery. Volume I. Peripheral Arterial Diseases. Chapter 6, Arteriovenous fistulas*. Hagerstown MD, Harper & Row Publishers, Inc., 1972
- ¹⁸Cranley JJ: *Vascular Surgery. Volume II. Peripheral Venous Diseases. Chapter 6, Operative management of acute venous thrombosis and thrombophlebitis*. Maryland, Harper & Row Publishers, Inc., in preparation



Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

WE ARE PLEASED AND PROUD

We are pleased and proud to be able to devote the whole of this special issue of the JOURNAL to a series of papers honoring Doctor Fiorindo A. Simeone. Although he is still active both at Brown University and at The Miriam Hospital, his official retirement took place at the end of the last academic year. Some years ago we had pointed out in these columns how the return of Simie to Providence, the scene of his formative years, had contributed significantly to making Rhode Island almost instantaneously a world center of surgical physiology.

His permanent legacy to Rhode Island is his outstanding contribution to the quality of medical and surgical care in the state, and more especially his nurturing here a strong tradition of basic science and physiology as the foundations of sound surgical practice.

While his academic career is entering a new phase, we look forward to having him live and work among us for many years as a stalwart member of the medical community. We are confident that he will contribute to the body of surgical knowledge both locally and nationally.



BUTLER HOSPITAL ANNUAL SYMPOSIUM

Shaping the Future: Planning and Funding for Mental Health Care/June 6-7, 1975

SYMPOSIUM MODERATOR — *Judd Marmor, M.D.*, President-Elect,
American Psychiatric Association

FEASIBILITY AND IMPLICATIONS OF INSURANCE FOR MENTAL
HEALTH
Henry A. Foley, Ph.D.

INFLUENCE OF FINANCING ON THE PRIVATE PRACTICE DELIVERY
SYSTEM
Robert W. Gibson, M.D.

DEVELOPMENT OF AN INTEGRATED MENTAL HEALTH DELIVERY
SYSTEM
William Goldman, M.D.

THE MISSING LINK IN MENTAL HEALTH CARE — THE PATIENT
Mike Gorman

Registration fee of \$30.00 includes all sessions and coffee breaks. Friday
lunch will be an additional \$5.00 (Saturday sessions will be completed by
1:00 pm).
Limited full scholarships for students and \$10.00 scholarships for residents
and interns are available. Deadline for reservations is May 10, 1975.

THIRD PARTY PAYERS: CURRENT STATUS AND FUTURE
ALTERNATIVES

Robert J. Laur, Ph.D.

ACCOUNTABILITY IN PSYCHIATRIC PRACTICE: PSRO AND UTILIZA-
TION REVIEW

Scott H. Nelson, M.D.

COMMUNITY MENTAL HEALTH IN ENGLAND
Norman Rosenzweig, M.D.

FEDERAL LEGISLATION AND MENTAL HEALTH CARE
Honorable William R. Roy, M.D., LL.D.

For registration forms and further information write:

Butler Hospital Annual Symposium
333 Grotto Avenue, Providence, Rhode Island 02906 (401) 521-3400
BUTLER HOSPITAL, A Brown University Member Hospital

CANCER IN THE LIVER

(Concluded from page 93)

terization method in the treatment of colonic metastasis to the liver.

5. The complications attributed to the percutaneous catheterization are not prohibitive.

REFERENCES

- ¹Ansfield FJ, Ramirez G, Skibba JL, et al.: Intra-hepatic arterial infusion with 5-fluorouracil. *Cancer* 28:1147-51, Nov 71
- ²Ariel IM: Treatment of inoperable primary pancreatic and liver cancer by the intra-arterial administration of radioactive isotopes (Y90 radiating microspheres). *Ann Surg* 162:267-78, Aug 65
- ³Ariel IM, Pack GT: Intra-arterial chemotherapy for cancer metastatic to liver. *Arch Surg* 91:851-62, Nov 65
- ⁴Cady B: Hepatic arterial patency and complications after catheterization for infusion chemotherapy. *Ann Surg* 178:156-61, Aug 73
- ⁵Cady B, Monson DO, Swinton NW: Survival of patients after colonic resection for carcinoma with simultaneous liver metastases. *Surg Gynecol Obstet* 131:697-700, Oct 70
- ⁶Donegan WL, Harris HS, Spratt JS Jr: Prolonged continuous hepatic infusion. Results with fluorouracil for primary and metastatic cancer in the liver. *Arch Surg* 99:149-57, Aug 69
- ⁷Hickey RC, Miller LS: Palliative radiotherapy and surgical measures for neoplasms of the colon, rectum, and anus. In Hickey RC: *Palliative Care of the Cancer Patient*. Boston, Little, Brown & Company, 1967. P.269
- ⁸Jaffe BM, Donegan WL, Watson F, et al.: Factors influencing survival in patients with untreated hepatic metastases. *Surg Gynecol Obstet* 127:1-11, Jul 68
- ⁹Klopp CT, Alford TC, Bateman J, et al.: Fractionated intra-arterial cancer chemotherapy with methyl bis amine hydrochloride; a preliminary report. *Ann Surg* 132:811-32, Oct 50
- ¹⁰Massey WH, Fletcher WS, Judkins MP, et al.: Hepatic artery infusion for metastatic malignancy using percutaneously placed catheters. *Am J Surg* 121:160-4, Feb 71
- ¹¹Swinton NW, Cady B, Nakra KS, et al.: Arterial infusion chemotherapy of liver metastases arising from rectal and colonic cancer. *Proc R Soc Med* 63: Suppl:21-3, 1970
- ¹²Tandon RN, Bunnell IL, Cooper RG: The treatment of metastatic carcinoma of the liver by the percutaneous selective hepatic artery infusion of 5-fluorouracil. *Surgery* 73:118-21, Jan 73
- ¹³Watkins E Jr, Khazei AM, Nahra KS: Surgical basis for arterial infusion chemotherapy of disseminated carcinoma of the liver. *Surg Gynecol Obstet* 130:581-605, Apr 70



Join R. I. PSRO

**MAKE YOUR VOICE
HEARD IN THE
REVIEW PROCESS**

RADIATION EFFECTS ON THE THYROID

(Continued from page 97)

iodine, relatively few neoplasms were found.⁶ Most other investigators obtained similar results. When neoplasms were obtained, periods of more than one year and up to two years were required. With trial and error over many years it has now become possible to produce neoplasms in almost half of the rats studied. Some of the reasons for previous failure now seem more evident.

For a variety of reasons the dose of ¹³¹I given to an experimental animal is not always the effective dose of radiation delivered to the gland. Investigators gave graded doses of ¹³¹I to groups of rats, basing the estimate of radiation delivered either on the dose given or an average of uptakes in some representative thyroids of animals in a group. It has been found that there was a wide variety of uptakes among individuals even though the animals were considered to be uniform. The amount of previous iodine intake was an important consideration. With variable amounts of iodide added to commercial rat food (usually an abundance), the uptake of ¹³¹I by the thyroid might be unusually low. On the other hand, an iodine deficient diet or the brief use of a goitrogen enhanced the uptake, but this produced hyperplasia, a change in the gland which alters the sensitivity of the cells to radiation. Furthermore, an iodine deficient diet promotes cannibalism. The rat has a peculiar sense of his need and selectively eats his brother's thyroid, satisfying that animal's avidity for iodine, but not altering the iodine deficiency of the others who did not get in on the kill. Thus a wide variety of uptakes among individuals of a group in the earlier experiments gave results that were far from uniform. With time it became evident that the younger the rats when radiated, the more likely the development of neoplasms.

During the past few years many of the problems described were at least partly solved by giving graded doses and identifying each animal and then measuring and recording the uptake in the gland of each of several hundred animals. Any subsequent finding in an animal's thyroid could then be related to the rad dose which that thyroid had received. Animals could be more precisely regrouped for subsequent study.

By using qualitative histochemical methods the amount of deoxyribonucleic acid (DNA) in individual cells of radiated rat thyroids can be measured. It was found that the large bizarre nuclei

that follow radiation contained more than the diploid value of DNA (as seen in the resting cell).¹⁰ Indeed, many of the largest nuclei contained more than twice this amount and therefore should have divided. Since thymidine is a precursor of DNA and is incorporated in the nucleus only of these cells that are preparing to divide, tritium-labelled thymidine and autoradiography can be used to identify mitotic activity in tissues. By utilizing this technique it was learned that the radiated cells when pressed to undergo mitosis (by giving a goitrogen) rapidly accumulated tritiated thymidine in preparation to divide, but failed to do so.¹¹ Furthermore, such thyroids did not increase in weight as much as would normally be expected when a goitrogen is given. Not only did the cells fail to divide as they should, but they attempted another cycle of mitosis by building up excessive amounts of DNA within the nucleus that had already failed to divide. The bizarre nuclear forms were thus interpreted as representing thwarted cell division.

For a few months after a very modest dose of ¹³¹I the rat thyroid could be made to increase in size, and cell division was shown to be taking place when a goitrogen was given. Mitosis was still possible for a time even after all radioiodine had disappeared from the gland. However, as more time lapsed (and long after all ¹³¹I was gone) the capacity for the gland to increase in size could not be demonstrated. By this time few cells took up the tritiated thymidine in their nucleus, showing that the ability to prepare for mitosis was impaired. Those few cells whose nuclei took up tritiated thymidine were, in general, the cells whose nuclei were unusually large and had an excessive amount of DNA.¹¹ All of the doses of ¹³¹I used in these experiments were less than those which produced architectural alterations in the microscopic picture of the gland. These experiments led to the use of lower and lower doses of radiation, and at these levels neoplasms were produced more readily.

EFFECTS OF DOSAGE

It now seems that there may be a relatively narrow range of radiation dose which produces neoplasms in the thyroid. Surely the larger doses used in the earlier years in rat experiments sterilized the cells so that cell division was not possible. Thus, part of our failure and the failure of others to produce neoplasms in earlier studies is attributable to giving too much radiation. When the occurrence of neoplasms is tabulated in a large series of animals where the dose for each animal was known,

the neoplasms have been frequently found after 2,000 to 6,000 rads in an unstimulated (normal) thyroid.¹² This is perhaps only 1/3 to 1/5 of the rad dose used to treat the hyperplastic (probably more radiation sensitive) gland of a human with Graves' disease. In man enough radiation is given to reduce hormone production. This dose usually causes architectural distortion of the microscopic structure of the gland. It also causes considerable damage to the nucleus, which probably precludes subsequent cell division. The resulting effect on the functional status of the thyroid in man is quite clear, since most all patients who are successfully treated with ¹³¹I ultimately go into a hypothyroid state. The radiated cells which continue to make hormone for some years finally die and are not replaced, because the crippled cells are incapable of forming replacements.¹³ Perhaps this degree of damage precludes even abnormal cell division and neoplasm development. This may explain why there is a very low incidence of malignant neoplasms following the doses of ¹³¹I commonly used as therapy in man.

It has long been recognized that the more central follicles of the rat thyroid are more active than those near the periphery. The follicles near the center are smaller, contain less colloid, and have taller cells. When a trace dose of ¹³¹I is given to a normal animal, the autoradiographs of the thyroid show a higher concentration of the isotope in these central follicles. The uptake, and therefore the radiation effect from a dose of ¹³¹I, is greater in the central part of the lobe than at the periphery.

There are two other reasons why there is less ionizing effect at the periphery of the gland. The beta ray of ¹³¹I, which delivers most of the ionizing effect in tissue, has a maximal range of only 2 mm with an average range of 0.44 mm. As one approaches the edge of the gland, the concentration of radiation effect in thyroid cells diminishes for two reasons. There are no follicles beyond the capsule of the gland to contribute radiation from that direction. Thus, the dose delivered at the periphery approaches half of that to the more centrally located cells. Since the ¹³¹I is concentrated and stored primarily in the colloid and since the follicles located at the periphery of the gland are larger, more ionization is spent in the colloid, and there is relatively less radiation to the cells. Two different types of autoradiographs give evidence of less radiation damage occurring at the periphery of the gland. One, using a second subsequent dose of ¹³¹I,

(Continued on next page)

shows that the central area which originally took up more ^{131}I now takes up less. The other, using tritiated thymidine, shows that after radiation from ^{131}I the nuclei of cells near the periphery are more inclined to take up tritiated thymidine and undergo mitosis than those in the central areas. These several reasons explain why architectural damage, if it can be detected after the relatively low doses of radiation, is found in the central portion of the gland and why neoplasms, if found in such a gland, are more often developing at the periphery¹²

EVOLUTION OF NEOPLASMS

One of the objectives of these studies of the production of thyroid neoplasms in rats has been to study the very early development of neoplasms and to learn how they evolve. As experience has been gained regarding the optimum dose of ^{131}I which will produce neoplasms but not destroy hormone synthesis or sterilize the cells, it has been found that neoplasms begin to appear only after about 12 or more months. This is approximately 1/3 of the life span of the rat. By irradiating large numbers of rats with non-sterilizing doses of ^{131}I , sacrificing the animals at short intervals and preparing serial microscopic sections of each lobe, a search for beginning neoplasms was made.¹² Occasional follicles may be found in which the epithelial cells are proliferating within the lumen of the follicle. To gain a better idea of the mitotic activity of the cells in such a gland, tritiated thymidine was given 4 hours before sacrifice so that those cells undergoing mitosis could be identified by autoradiography. These localized areas of proliferation appear to be clones of cells which represent the origin of neoplasms. Such a cluster of cells is seen first in the wall of a follicle. Some of these clusters of cells occupy a volume equal to several follicles (Figure 3). As the cluster becomes larger and there appears to be thin connective tissue capsules surrounding it, the resulting structure may be called a microadenoma. At this early stage of development it is impossible to classify such lesions as benign or malignant, but the degree of mitotic activity on autoradiographs may suggest their malignant potentialities. Some lesions show an abundance of cells in mitosis, as seen in Figure 4, while others show relatively few. Autoradiographs with both tritium and ^{131}I show that most of these lesions are not taking up ^{131}I (see Figure 3).

Some lesions may not be grossly detectable on the surface of the thyroid if the gland is surgically exposed under anesthesia at 14 to 18 months. This is the time that the formation of a neoplasm may

be expected. A few weeks later at sacrifice there may be a mass occupying one lobe, and a histologic section will show a highly invasive lesion in which many nuclei have taken up tritiated thymidine in the short span of only 4 hours before sacrifice. This serves to illustrate how rapidly some of the lesions grow (Figure 4).

MARSHALL ISLANDS EXPERIENCE

I should like to turn to the observations on human subjects, namely, the people who were on Rongelap Atoll in the Marshall Islands in 1954 when the first hydrogen bomb test resulted in the accidental exposure of these people.^{14, 15} Compared to other isotopes, there was a relatively high concentration of several radioisotopes of iodine in the fallout. Some of the isotopes of iodine were relatively short-lived, making the calculation of the dose of radiation to the thyroid difficult to estimate. Spontaneous development of thyroid nodules is very rare in these people, whose diet contains an abundance of iodine. Although all of the exposed persons were examined very thoroughly annually, it was not until the ninth year following exposure that the first nodules began appearing in their thyroids. During the past 20 years, there have been 25 of 86 exposed people who have developed nodules that have been surgically explored. Although most of these proved to be adenomas, three were carcinoma; one had metastasized. Of 19 persons who were under the age of 10 when exposed, 17 have developed thyroid pathology. The results of the follow-up to 1970 have been reported.^{14, 15} On another atoll much further away six of 157 exposed persons have developed neoplasms, one of which proved to be a carcinoma. The relationship to radiation on this atoll is far less certain because the rad dose was extremely low.

One of the most impressive features of all of these Marshallese thyroids has been the multiplicity of tiny microadenomas in addition to the dominant tumor which drew attention on physical examination. Many of these tiny lesions have been solid cellular or papillary in type just as were the predominant types in the experimental rats. We have prepared autoradiographs of many of the Marshallese lesions after they were removed. Most lesions display little or no uptake of radiiodine. The similarity to the lesions in the radiated rats is striking.

There are two possible theories which may explain the development of the neoplasms following radiation to the thyroid. One holds that the neo-

plasma develop "de novo" following nuclear de-
 rangement in the thyroid cell. The other proposes
 that the loss of thyroid function results in hypothy-
 roidism, which in turn causes an increased output of
 thyroid stimulating hormone (TSH) from the pi-
 tuitary. This results in chronic stimulation to hyper-
 plasia and the development of neoplasms. Maloof¹⁶
 showed that if supplemental thyroid hormone is
 given, the hyperplasia following radiation in rats
 does not occur, but the bizarre nuclear forms which
 develop as a result of radiation, although reduced
 in number, are not inhibited from forming. The
 dose estimated from the data on those rats was
 35,000 rads. The much lower doses of ¹³¹I which
 are more likely to be followed by neoplasms seem
 to cause far less functional damage. The Marshal-
 lese people have now been given full hormone re-
 placement since the first nodules were discovered
 11 years ago. They are continuing to develop the
 lesions. However, the number of individuals re-
 maining at risk is now greatly reduced, owing to
 deaths of those who were elderly when exposed and
 who have died (of causes other than those related
 to fallout) and owing to surgical exploration of the
 thyroid.

RESPONSE IN NORMAL AND HYPERPLASTIC GLANDS

No valid comparison can be made between the
 patients treated with ¹³¹I for hyperthyroidism in
 the National Thyrotoxicosis Follow-up Study and
 the Marshallese. However, some differences in the
 two groups may be pointed out. The occurrence of
 neoplasms in the two groups is very different. The
 doses of radiation to the thyroids are presumably
 also quite different. The maximal dose to Marshal-
 lese thyroids was estimated at about 1,400 rads,
 while the customary dose used in hyperthyroidism
 is usually 8,000 to 12,000 rads. The hyperplastic
 glands of hyperthyroidism should be more sensi-
 tive to radiation, while the Marshallese glands were
 normal. On the other hand, two of the exposed
 children among the Marshallese sustained enough
 radiation effect so that they ultimately suffered
 from severe hypothyroidism, suggesting that at
 least some individuals received a greater dose than
 was estimated. Most of the adults seem to have
 remained euthyroid. Now 20 years following radi-
 ation, the Marshallese are still developing lesions
 in their thyroid, emphasizing the importance of
 very lengthy follow-up.

The most plausible, but unproved, explanation
 for the high frequency of neoplasms in the Mar-
 shallese compared to patients with hyperthyroidism
 is that the hyperthyroid patients received much
 more damage to the gland than the Marshallese.
 Therefore, experimental data suggest that the ca-
 pacity for cell division has been so seriously im-
 paired that neoplasm formation is thwarted in pa-
 tients treated with ¹³¹I.

REFERENCES

- ¹Duffy BJ Jr, Fitzgerald PJ: Thyroid cancer in child-
 hood and adolescence; report on 28 cases. *J Clin*
Endocrinol 10:1296-1308, Oct 50
- ²Winship T, Rosvold RV: Childhood thyroid carci-
 ma. *Cancer* 14:734-43, Jul-Aug 61
- ³Beach SA, Dolphin GW: A study of the relation-
 ship between x-ray dose delivered to the thyroid of
 children and the subsequent development of malig-
 nant tumors. *Phys Med Biol* 6:583-98, Apr 62
- ⁴Raventos A, Winship T: The latent interval for
 thyroid cancer following irradiation. *Radiology* 83:
 501-08, Sep 64
- ⁵Dolphin GW: The risk of thyroid cancers following
 irradiation. *Health Phys* 15:219-28, Sep 68
- ⁶Pochin EE: Leukemia following radioiodine treat-
 ment of thyrotoxicosis. *Brit Med J* 2:1545-50, 26
 Nov 60
- ⁷Saenger EL, Thoma GE, Tompkins EA: Incidence of
 Leukemia following treatment of hyperthyroidism.
 Preliminary report of the Cooperative Thyrotoxicosis
 Therapy Follow-Up Study. *JAMA* 205:855-62, Sep
 68
- ⁸Dobyns BM, Sheline GE, Workman JB, et al.: Ma-
 lignant and benign neoplasms of the thyroid in pa-
 tients treated for hyperthyroidism: a report of the
 cooperative thyrotoxicosis therapy follow-up study.
J Clin Endocr 38:976-98, June 74
- ⁹Maloof F, Dobyns BM, Vickery AL: Effects of vari-
 ous doses of radioactive iodine on function and
 structure of the thyroid of the rat. *Endocrinol* 50:
 612-38, June 52
- ¹⁰Dobyns BM, Didschenko I: Nuclear changes in thy-
 roidal epithelium following radiation from radio-
 iodine. *J Clin Endocr* 21:699-720, Jun 61
- ¹¹Dobyns BM, Rudd AE, Sanders MA: Desoxyribo-
 nucleic acid (DNA) synthesis in the radiated and
 stimulated thyroid gland. *Endocrinology* 81:1-13,
 Jul 67
- ¹²Dobyns BM: Unpublished data
- ¹³Dobyns BM, Robison LR: Dexoxylibonucleic acid
 content associated with nuclear changes in ¹³¹I
 irradiated human thyroids. *J Clin Endocr* 28:875-85,
 Jun 68
- ¹⁴Conrad R, et al.: Medical Survey of the People of
 Rongelap and Utirik Islands, 13, 14 and 15 Years
 after Exposure to Fallout Radiation. Virginia,
 Brookhaven National Laboratory, Jun 70, BNL50220
 (T-562)
- ¹⁵Conrad RA, Dobyns BM, Sutow WW: Thyroid neo-
 plasia as late effect of exposure to radioactive io-
 dine in fallout. *JAMA* 214:316-24, 12 Oct 70
- ¹⁶Maloof F: Effects of hypophysectomy and of thy-
 roxine on radiation-induced changes in the rat
 thyroid. *Endocrinology*. 56:209-14, Feb 55



CLOTTING FACTORS IN BURN SEPSIS

(Concluded from page 100)

though the clotting studies indicated severe abnormalities at this time, he did not develop a bleeding disorder. With appropriate antibiotic therapy, blood cultures became sterile and the platelet count rose to 205,000/mm.³ There was improvement in platelet function and the clinical course stabilized.

On the 92nd hospital day, the patient developed a third episode of sepsis, and candida albicans was cultured from the blood. At this time the platelet count was 67,000/mm.³ and it rapidly fell to 21,000/mm.³ Partial thromboplastin time was normal, as were the prothrombin time and thrombin time. The fibrinogen level was 69 mg per cent, and the Factor V levels were increased four-fold. His platelets demonstrated no ability to aggregate during this third and final episode of sepsis.

As is illustrated in the clinical case reviewed, there are many abnormalities observed in the clotting ability of individual patients who develop sepsis during the course of their therapy for major burns. However, the data obtained from the 18 study patients when sepsis was present, as compared to that data when sepsis was not present, failed to indicate either a diagnostic or predictive change in any of the individual clotting studies which could be used as a guide to earlier detection of the presence of sepsis. Even though the mean platelet counts obtained from patients during sepsis were significantly depressed, the peak values of platelet counts during sepsis were not significantly different from platelet counts obtained when patients were not septic, so that an individual determination of platelet count would be of little value unless it was dramatically low, as illustrated in the third episode of sepsis in the clinical case described. Even that observation is not of absolute significance, since in many instances platelet counts were markedly reduced for the 24 hours following extensive surgical debridement of patients with burn wound invasion without positive blood cultures.

DISCUSSION

The more recent observations of altered platelet function coincident with sepsis suggest that there may be a more direct relationship between these abnormalities and the presence of sepsis. If additional studies do in fact demonstrate a significant relationship between platelet function and sepsis, it could well be that this finding would have diagnostic or predictive value, or both, regarding the presence of sepsis in thermally injured patients.

The ability to diagnose the onset of sepsis in severely burned patients is of major importance, since in many of these patients their clinical course is unstable and very poor for extended periods of time even though sepsis is not present. All too frequently the diagnosis of sepsis is made on the notification of the physicians by the Infectious Disease Laboratory of a positive blood culture which was obtained 48 to 72 hours previously. That is the time span which frequently allows patients to reach an irretrievable clinical situation, while earlier appreciation of the presence of sepsis could have led to earlier therapy and perhaps improved survival. Work is continuing in our laboratory in an attempt to verify the relationship between sepsis and altered platelet function as an early sign of the presence of sepsis, so as to inform the clinician long in advance of the return of positive blood culture from the bacteriology lab.

SUMMARY

A prospective study was carried out in the Burn Unit of Cleveland Metropolitan General Hospital in which screening clotting tests, clotting factor assays, platelet counts, and more recently platelet function studies were performed on 18 patients of whom eight developed sepsis. The data were collated so as to compare the values of these tests in the presence and absence of sepsis in the hope of determining differences which would be predictive or diagnostic of the presence of sepsis before verification by blood culture reports would be available. No significant differences in peak values of prothrombin time, partial thromboplastic time, thrombin time, fibrinogen levels, Factor V and Factor VIII levels, and platelet counts could be demonstrated. A preliminary study comparing platelet function with the presence or absence of sepsis suggests that there may be a correlation which could be of diagnostic or predictive value. Clinical studies are now in progress to attempt to demonstrate the statistical evidence for that observation.

REFERENCES

- ¹Curreri PW, Katz AJ, Dotin LN, et al.: Coagulation abnormalities in the thermally injured patient. *Curr Top Surg Res* 2:401-11, 1970
- ²Gehrke CF, Penner JA, Niederhuber J, et al.: Coagulation defects in burned patients. *Surg Gynecol Obstet* 133:615-6, Oct 71
- ³McManus WF, Eurenus K, Pruitt BA Jr: Disseminated intravascular coagulation in burned patients. *J Trauma* 13:416-22, May 73
- ⁴Cowan DH, Bowman LS, Fratianne RB, et al.: Changes in platelet function and clotting in patients (Concluded on page 134)

MICROCIRCULATORY DYNAMICS

(Continued from page 103)

hypotension have been described in earlier publications.^{11, 12} No significant complications appeared to be related to the use of controlled normovolemic hypotension.

EFFECTS OF HEMATOCRIT AND VISCOSITY OF BLOOD ON BLEEDING

As noted above, under appropriate circumstances the flow of blood varies inversely with the viscosity in accordance with Poiseuille's Law. In the presence of a normal level of fibrinogen, and at a constant shear rate and temperature, the principal determinant of the viscosity of blood is the hematocrit (Fig. 3). At each shear rate, hemodiluted blood is significantly less viscous than the blood with the normal hematocrit. In addition, as the shear rate — or velocity gradient — decreases, the viscosity of blood increases. This implies that blood is more viscous when flowing slowly through a blood vessel than when it flows rapidly.

In experimental shock, techniques for volume replacement which produce hemodilution and a reduction in viscosity have been shown to produce an increased rate of blood flow in the microcirculation. On the other hand, these considerations suggest that the presence of profound anemia may at times contribute to an increased rate of flow from the bleeding vessel. Observations in six profoundly anemic patients with slow but persistent upper gastrointestinal bleeding (1 to 2.5 liters/day) have suggested that this might indeed be the case, and that bleeding may be reduced if the hematocrit and viscosity of blood are restored to normal by the infusion of packed red cells.¹³

An example is a 47-year-old man who was admitted in coma with frontal lobe abscess which ruptured into a lateral ventricle. Five days after drainage of the abscess, while on dexamethasone, he developed upper gastrointestinal bleeding. Dexamethasone was stopped. In spite of the transfusion of 15 units (7,500 ml) of whole blood over a five-day period, the hematocrit fell to a low of 14 per cent. A total of 8 units of packed cells was transfused over the 6th and 7th days of gastrointestinal bleeding. The hematocrit rose to 35 per cent, and objective evidence of bleeding ceased. Gross bleeding did recur a few days later, however, and the hematocrit again fell to 24 per cent. With the transfusion of 6 more units of packed cells the hematocrit rose to 36 per cent. The bleeding stopped again and did not recur. Similar observations were made in 5 additional critically ill pa-

tients with persistent bleeding from superficial stress ulcers or gastritis.

In the laboratory we have also found a correlation between the level of hematocrit and the rate of bleeding. In pairs of heparinized rats the hematocrit was lowered to an average of 32 per cent by withdrawal of blood and replacement with Ringer's lactate solution. The tail was then amputated, and blood loss from the tail was measured in calibrated tubes. The hematocrit in one rat was increased by infusion of packed cells to replace blood loss, and it was lowered in the other member of the pair by infusion of plasma. The rate of bleeding from the tails showed a significant inverse correlation with the hematocrit, although scattering of data indicated that a number of uncontrolled variables also affected the bleeding rate.

Observations were also made of the effects of hematocrit on blood flow through a glass capillary tube, through a small hole in the side of rubber tubing, and through a small branch of an excised canine artery. From the glass capillary tube (essentially a capillary viscometer) the flow was inversely proportional to viscosity at all perfusion pressures. The flow of blood with a hematocrit of 15, for example, was twice that of blood with hematocrit 45. With rubber tubing and canine artery, the changes in flow with changes in hematocrit were similar although somewhat less than with the glass capillary tube and were greater at low than at high perfusion pressures and flows.

Some of the reasons for the differences in behavior of the elastic vessel and glass capillary may be apparent from a consideration of laws governing the flow of a viscous fluid through a cylindrical tube. Poiseuille's Law applies when the flow of the fluid in the vessel is laminar. The vessel must be of sufficient length to permit the development of laminar flow and interaction between the viscous

(Continued on next page)

**PRIME OFFICE SPACE
FOR LEASE
PAWTUCKET
OPPOSITE MEMORIAL HOSPITAL**

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

**CALL ALLIED INVESTMENT
434-2974 or 433-0759**

fluid and the vessel wall. The length required for the development of laminar flow is proportional to the rate of flow and inversely proportional to the viscosity. In addition, turbulence will limit the development of the boundary layer, thus reducing the effects of viscosity on flow. Turbulence occurs at high rather than at low flows.

It is apparent therefore that the hematocrit and its effects on viscosity are most important in small vessels with a low velocity flow. One would expect little effect of changes in viscosity on bleeding from a tangential wound in a large vessel, but significant effects may be observed in slow persistent bleeding from small arteries. The transfusion of packed red cells to restore a normal hematocrit, red cell mass, and viscosity of blood may lead to a significant reduction in the rate of bleeding in profoundly anemic patients.

DISCUSSION

Persistent hemorrhage in the critically ill patient often contributes to a fatal outcome. Spontaneous clotting and subsequent healing of the hemorrhagic lesion is the most desirable method for arresting the bleeding. When this does not occur with the usual conservative measures, including correction of any clotting defects which may be present, more vigorous measures may be necessary. Although surgical ligation of the bleeding vessel is usually the most definitive method for arresting the bleeding, there are instances where the risk of operation may be prohibitive. The measures for reducing flow described above may be considered under these circumstances.

Of these measures, the use of vasoconstrictors with consequent reduction of the radius of the bleeding vessel may be among the most effective. According to Poiseuille's Law, the flow is proportional to the fourth power of the radius, and a 50 per cent reduction flow, therefore, may follow a 16 per cent reduction in the radius of the vessel. There, however, are several potential disadvantages to these procedures. The profound reduction in flow effected by the vasoconstrictors may cause severe ischemia to tissues with resulting necrosis^{6, 7} or other adverse effects of ischemia. The intra-arterial administration of a vasoconstrictor also entails the potential hazards of the inlying arterial catheter.

In our opinion, the use of pharmacologically controlled normovolemic hypotension may prove to be safer. Although flow is reduced with hypotension, small vessels appear to remain open and allow for adequate exchange between blood and tissues.

The incidence of complications related to closely monitored normovolemic hypotension do not appear to be great. In our series no complications were directly attributable to the pharmacologic regime employed. In a review of complications of controlled hypotension used in conjunction with anesthesia and surgery, Little¹⁴ reported complications in 3.2 per cent of 27,930 cases, of which 0.35 per cent were fatal. This incidence appears to be acceptably low when compared to the seriousness of hemorrhage in the patients under consideration.

Potentially the safest of the methods discussed is the use of packed erythrocytes to restore the viscosity of blood to normal. In profoundly anemic patients the infusion of erythrocytes to provide a normal red cell mass and hematocrit appears to carry little risk other than those associated with volume expansion and transfusion. It is likely to be effective in profoundly anemic patients with slow but persistent hemorrhage.

In his editorial supporting the virtues of red cells in shock,² Doctor Francis Moore observed, "The red blood cell is one billion times as heavy and 600 times as long as the albumin molecule. It stays at home all its life, never wandering across the capillary to visit far-off fields. It is too big, fat, and heavy to escape. When we infuse it to restore blood volume in oligemic shock, it stays right in the blood stream and adds its collective size to the intravascular mass . . . let us bring up a new generation of surgeons to appreciate the true function of the red cell."

To this we may add that one of the important but often unappreciated functions of the red cell is to maintain a normal viscosity of the blood.

SUMMARY AND CONCLUSIONS

1. Measures which alter the dynamics of blood flow in small vessels may be used as adjuncts in the control of hemorrhage. In accordance with Poi-

seuille's Law, $Q = \frac{\pi r^4 \Delta P}{8 \eta L}$, flow may be dimin-

ished if the radius of the vessel is decreased, the pressure within the vessel is decreased, or the viscosity of blood is increased.

2. Some of the techniques by which the radius, pressure, and viscosity may be changed to reduce hemorrhage are discussed. Intra-arterial administration of vasoconstrictors may be used to reduce the radius of the vessel. Ganglionic blockade with Arfonad[®] may be used to lower arterial pressure and maintain a controlled normovolemic hypoten-

sion. In anemic patients the hematocrit and red cell mass may be increased to normal levels by the infusion of red cells with restoration of a normal blood viscosity.

REFERENCES

- ¹Cannon WB: *Traumatic Shock*. New York, D. Appleton Company, 1923
- ²Moore FD: The conquest of space-by the red blood cell. *Ann Surg* 135:143-44, Jan 52 (Repr. in *Anesth Analg* 38:413-4, Sep-Oct 59)
- ³Simeone FA: Shock and blood pressure. *Surg Gynecol Obstet* 108:740-2, Jun 59 (Repr. in *Anesth Analg* 38:415-7, Sep-Oct 59)
- ⁴LeVeen HH, Falk, G, Diaz C, et al.: Control of gastrointestinal bleeding. *Am J Surg* 123:154-9, Feb 72
- ⁵Nusbaum M, Baum S, Blakemore WS, et al: Clinical experience with selective intra-arterial infusion of vasopressin in the control of gastrointestinal bleeding from arterial sources. *Am J Surg* 123:165-72, Feb 72
- ⁶Renert WA, Button KF, Fuld SL, et al.: Mesenteric venous thrombosis and small-bowel infarction following infusion of vasopressin into the superior mesenteric artery. *Radiology* 102:299-302, Feb 72
- ⁷Conn HO, Ramsby GR, Storer EH: Selective intra-arterial vasopressin in the treatment of upper gastrointestinal hemorrhage. *Gastroenterology* 63:634-45, Oct 72
- ⁸Hopkins RW, Simeone FA: Trimethaphan camsylate in hemorrhagic shock. *Arch Surg* 89:365-72, Aug 64
- ⁹Simeone FA, Hopkins RW: *The Physiology of Prolonged Oligemic Hypotension* Progress Report No. 8. Washington, Office of the Surgeon General, 1967
- ¹⁰Gillies J: Physiological trespass in anesthesia. *Proc R Soc Med* 45:1-6, Jan 52
- ¹¹Hopkins RW, Fratianne RB, Penn I, et al.: Controlled hypotension in the management of severe hemorrhage. *Ann Surg* 160:669-81, Oct 64
- ¹²Hopkins RW, Fratianne RB, Abrams JS, et al.: Controlled hypotension for uncontrolled hemorrhage. *Arch Surg* 95:517-30, Sep 67
- ¹³Hopkins RW, Fratianne RB, Rao KV, et al.: Effects of hematocrit and viscosity on continuing hemorrhage. *J Trauma* 14:482-93, Jun 74
- ¹⁴Little DM Jr: *Controlled Hypotension: In Anesthesia and Surgery*. Illinois, Charles C. Thomas Publishers, 1956



RESPIRATORY MONITORING OF THE CRITICALLY ILL PATIENT

(Concluded from page 105)

inates presentation of most useless or erroneous numbers. Since no system is perfect, the clinician must still exercise judgment and skill in interpreting the results. The wealth of new information made available by the system described makes this a challenge worth his effort.

Perhaps the most useful data obtained with such a system include:

- 1) FiO_2 (fractional concentration of inspired O_2) accurately to verify this value.
- 2) PACO_2 (alveolar PCO_2), as an estimate of

the arterial PCO_2 , and for calculation of V_D (alveolar or physiological dead space).

- 3) Ct (total pulmonary compliance), a measure of lung stiffness and one of the best early indications of impending pulmonary edema.
- 4) Rt (total airway resistance, nonelastic), a measure of occlusions in the major airways, such as secretions or bronchial spasm.
- 5) VO_2 (oxygen consumption), from which may be computed an estimate of the caloric consumption of the patient, and the cardiac output if an arterial and venous blood gas are drawn as well.
- 6) PAO_2 (alveolar PO_2), used for calculation of Qs/Qt (intrapulmonary shunt fraction), without the need to change the FiO_2 to 1.0 or air.

In addition, certain special programs available on demand at the bedside are measurement of FRC (functional residual capacity), vital capacity, forced expired volume, and others requiring patient cooperation or use of special gas mixtures.

SUMMARY

A system for monitoring both the pulmonary mechanics and respiratory gas exchange of several intubated patients is outlined. Bidirectional signals of gas flow, pressure, temperature, and fractional concentrations of O_2 , CO_2 and N_2 are measured. The most expensive instrumentation is time-shared among the beds monitored. Most calibration is automatic, and the system runs continuously, monitoring each bed for approximately a minute each 20 minutes. Spot readings and special measurements may be called in from the bedside. The data acquired by the system are outlined.

REFERENCES

- ¹Osborn JJ, Beaumont JO, Raison J, et al.: Measurement and monitoring of acutely ill patients by digital computer. *Surgery* 64:1057-70, Dec 68
- ²Turney SZ, Blumenfeld W, Wolf S, et al.: Respiratory monitoring. Recent development in automatic monitoring of gas concentration, flow, pressure, and temperature. *Ann Thorac Surg* 16:184-92, Aug 73
- ³Blumenfeld W, Turney SZ, Denman RJ: A coaxial ultrasonic pneumotachometer. *Med Biol Eng* Submitted for publication.



ENERGY METABOLISM IN SEPSIS AND TRAUMA

(Continued from page 110)

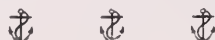
day, supports this idea. It is apparent that the low output state is a vicious cycle in which myocardial failure plays a progressive role. The prompt ele-

(Continued on next page)

vation of cardiac output in such patients and animals after the administration of glucose potassium and insulin (GKI) is dramatic.¹⁰ One gram of glucose per Kg body weight, 1 unit of insulin per Kg body wt, and 20 mEq of potassium are mixed in a flask or intravenous bag containing 10 grams of albumin. The mixture is infused over a 15 minute period. In a series of 15 patients in septic shock cardiac output rose from 2.9 ± 0.4 to 7.4 ± 0.6 L/min. The mean arterial blood pressure rose from 60 to 81 mm Hg, while central venous pressure and pulmonary wedge pressure (left atrial) both decreased. In 10 of the 15 patients the high output was maintained. Pulmonary function improved. It must be pointed out that GKI therapy has potential dangers, and its use at the present must be limited to situations in which myocardial failure is demonstrated and where adequate hemodynamic and biochemical monitoring is available. One can only speculate that in the presence of the low blood insulin concentration in the low output septic state many tissues including the heart fail to function because of ineffective metabolic production of energy.

REFERENCES

- ¹Alexander JW: Host defense mechanisms against infection. *Surg Clin North Am* 52:1367-78, Dec 72
- ²Bergmeyer HHU, editor: *Methods of Enzymatic Analysis*. Translated by DH Williamson. New York, Academic Press Inc., 1965
- ³Blackburn GL, Flatt JP, Clowes GHA Jr, et al.: Peripheral intravenous feeding with amino acid solutions. *Am J Surg* 125:447-54, Apr 73
- ⁴Blackburn GL, Flatt JP, Clowes GHA Jr, et al.: Protein sparing therapy during periods of starvation with sepsis or trauma. *Ann Surg* 177:588-94, May 73
- ⁵Bistrian B, Blackburn GL, Scrimshaw NS: Malnutrition, cellular immunity in the hospitalized patient. *Clin Res* 21:972, Dec 73
- ⁶Cahill GF Jr: Banting Lecture. Physiology of insulin in man. *Diabetes* 20:785-99, Dec 71
- ⁷Cahill GF Jr: Starvation in man. *N Engl J Med* 282:668-75, 19 Mar 70
- ⁸Clowes GHA Jr: Oxygen transport and utilization in fulminating sepsis and septic shock. In Hershey SG, DelGuercio LRM, McConn R, editors: *Septic Shock in Man*. Boston, Little, Brown and Company, 1971
- ⁹Clowes GHA Jr, DelGuercio LR: The circulatory response to the trauma of surgical operations. *Metabolism* 9:67-81, Jan 60
- ¹⁰Clowes GHA Jr, O'Donnell TF Jr, Ryan NT, et al.: Energy metabolism in sepsis: treatment based on different patterns in shock and high output state. *Ann Surg* 179:684-96, May 74
- ¹¹Clowes GHA Jr, Vucinic M, Weidner MG: Circulatory and metabolic alterations associated with survival or death in peritonitis: clinical analysis of 25 cases. *Ann Surg* 163:866-85, Jun 66
- ¹²Cuthbertson DP, Tilstone WJ: Metabolism during the post-injury period. *Advances Clin Chem* 12:1-55, 69
- ¹³Dole VP, Meinertz H: Microdetermination of long-chain fatty acids in plasma and tissues. *J Biol Chem* 235:2595-9, Sep 60
- ¹⁴DuBois EF: *Metabolism in Health and Disease*. Philadelphia, Lea & Febiger, 1936. Third Edition. Chapter 16
- ¹⁵Dudrick SJ, Steiger E, Long JM, et al.: Role of parenteral hyperalimentation in management of multiple catastrophic complications. *Surg Clin North Am* 50:1031-8, Oct 70
- ¹⁶Duke HJ Jr, Jørgensen SB, Broell Jr, et al.: Contribution of protein to caloric expenditure following injury. *Surgery* 68:168-74, Jul 70
- ¹⁷Hiebert JM, McCormick JM, Egdahl RH: Direct measurement of insulin secretory rate: studies in shocked primates and postoperative patients. *Ann Surg* 176:296-304, Sep 72
- ¹⁸Howard MJ: Studies of the absorption and metabolism of glucose following injury. The systemic response to injury. *Ann Surg* 141:321-6, Mar 55
- ¹⁹Kinney JM: Energy demands in the septic patient. In Hershey SG, DelGuercio LRM, McConn R, editors: *Septic Shock in Man*. Boston, Little, Brown and Company, 1971
- ²⁰Kinney JM, Roe CR: The caloric equivalent of fever: I. Patterns of postoperative response. *Ann Surg* 156:610-22, Oct 62
- ²¹MacLean LD, Mulligan WG, McLean APH, et al.: Patterns of septic shock in man — a detailed study of 56 patients. *Ann Surg* 166:543-62, Oct 67
- ²²O'Donnell TF Jr, Clowes GHA Jr, Blackburn GL, et al.: Relationship of hind limb energy fuel metabolism to the circulatory responses in severe sepsis. *J Surg Res* 16:112-23, Feb 74
- ²³Randall HT, Dudrick SJ: Surgical nutrition: Parenteral and oral. In *Manual of Preoperative and Postoperative Care*, Committee on Pre and Postoperative care, American College of Surgeons. Philadelphia, W.B. Saunders Company, 1971. Second Edition. Chapter 4
- ²⁴Rocha M, Santeusano F, Faloona GR, et al.: Abnormal pancreatic alpha-cell function in bacterial infections. *N Engl J Med* 288:700-3, 5 Apr 73
- ²⁵Roe CF, Kinney JM: The caloric equivalent of fever: II. Influence of major trauma. *Ann Surg* 161:140-7, Jan 65
- ²⁶Rubin JW, Clowes GHA Jr: Cardiovascular stresses in surgery. *Surg Clin North Am* 49:489-504, Jun 69
- ²⁷Ryan NT, Blackburn GL, Clowes GHA Jr: Differential tissue sensitivity to elevated endogenous insulin levels during experimental peritonitis in rats. *Metabolism* (In Press, 1974)
- ²⁸Ryan NT, Broge LE, Clowes GHA Jr: Enzymatic adaptations for energy production during sepsis. *Physiologist* 15:254, Aug 72
- ²⁹Shoemaker WC, Montgomery ES, Kaplan E, et al.: Physiologic patterns in surviving and nonsurviving shock patients. *Arch Surg* 106:630-6, May 73
- ³⁰Soeldner JS, Slone D: Critical variables in the radioimmunoassay of serum insulin using the double antibody technic. *Diabetes* 14:771-9, Dec 65
- ³¹Stephens RV, Randall HT: Use of a concentrated, balanced, liquid elemental diet for nutritional management of catabolic states. *Ann Surg* 170:642-67, Oct 69
- ³²Stolwijk JA, Hardy JD: Partitional calorimetric studies of responses of man to thermal transients. *J Appl Physiol* 21:967-77, May 66



Recent Advances In The Diagnosis And Management Of Respiratory Distress Syndrome

Further Progress Will Hopefully Reduce Morbidity And Mortality To A Minimum

By Edward H. Karotkin, M.D. and William Oh, M.D.

The respiratory distress syndrome (RDS) or Hyaline membrane disease is the most common disorder of prematurely born infants and is a leading cause of morbidity and mortality during the neonatal period. Research investigations during the past decade have accumulated data that are useful for the prenatal diagnosis and preventive perinatal management of this disease.

In 1959 Avery and Meade¹ first demonstrated the relationship of decreased pulmonary surfactant content and the occurrence of hyaline membrane disease in premature infants. Numerous other investigators subsequently confirmed this finding and established the fundamental concept that decreased surfactant production by the type II alveolar cell is the major reason for the development of RDS.²⁻⁵ Furthermore, surfactant synthesis by the human fetal type II alveolar cell is directly related to gestational age. Hence, the incidence of RDS is invariably related to the degree of fetal pulmonary maturation.

PATHOGENESIS

The current etio-pathologic concept of RDS is as follows (Fig. 1): The reduction of alveolar surfactant leads to massive alveolar atelectasis with un-

even ventilation-perfusion ration and hypoventilation. Hypercapnia may ensue, contributing to respiratory acidosis. The hypoxemia-induced anaerobic metabolism will lead to lactic acidemia which in turn results in metabolic acidosis. The hypoxemia and acidemia will further inhibit the ability of the type II cell to produce surfactant. In addition, increased pulmonary vascular resistance⁶ will ensue, resulting in the phenomenon of pulmonary hypoperfusion.⁷ Pulmonary hypoperfusion causes increased capillary permeability, which in turn results in leakage of plasma into the interstitial tissues. The fibrinogen contained in the plasma is converted to fibrin, which forms the hyaline-like material from which the name hyaline membrane disease was derived. The presense of these materials will increase alveolar-capillary gradient and reduce the efficiency of gas diffusion across the alveolar-capillary bed, resulting in hypoxemia and hypercapnia. Therefore, it can be seen that a series of vicious cycles is operating at various steps in the pathogenesis of RDS with reduced surfactant synthesis being the most important initiating event.

It is important to emphasize that surfactant synthesis is a biological phenomenon and, as such, is dependent on an optimal environment at the cellular level to insure its continuous production. Unfavorable tissue perfusion, extremes in pH, hypothermia, and hypoxemia will compromise surfactant production. These concepts underscore the impor-

(Continued on next page)

From the Department of Perinatal Medicine, Brown University Program in Medicine, and the Women and Infants Hospital of Rhode Island.

This is one of a series of papers supported by the Continuing Education Program of the Rhode Island Health Sciences Education Council.

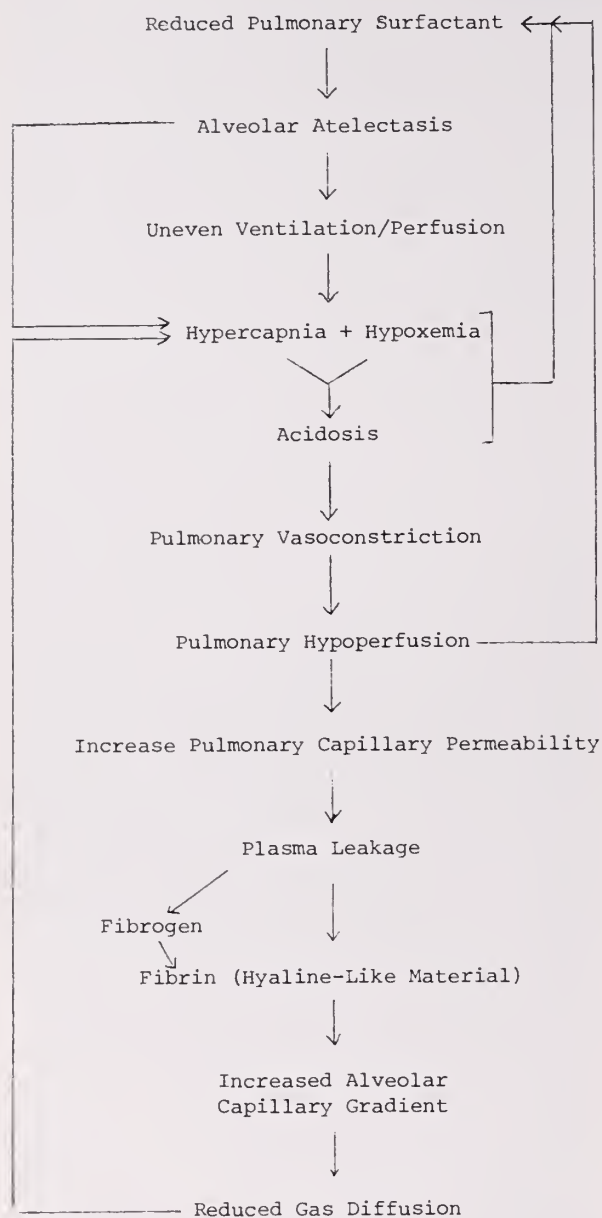


FIGURE 1.

tance of maintaining the proper physiological environment for the fetus in utero and the infant after birth, so the enzyme system involved in the production of surfactant is kept functioning continuously at optimum levels. From the clinical point of view these concepts are consistent with the observation that keeping the fetus free of fetal distress during labor^{8,9}, the immediate correction of neonatal acidemia by the administration or intravenous sodium bicarbonate, and correction of hypoxemia

by oxygen administration will reduce the severity of RDS and improve survival rate.^{10,11}

DIAGNOSIS

The growth of knowledge in this field has greatly enhanced one's ability to assess fetal lung maturation prior to delivery and to understand what processes are involved in the acceleration of fetal lung maturation by nature or by pharmacologic agents. Since lung fluid contributes significantly to the formation of amniotic fluid,¹² the determination of the phospholipid content in amniotic fluid has been used to assess fetal lung maturation. Gluck, *et al.*¹³ have shown that lung maturation is directly related to the lecithin: sphingomyelin ratio of amniotic fluid and that an L/S ratio of 2:1 or greater would indicate that the lung is mature. A bedside screening test (foam stability or shake test) developed by Clements, *et al.*¹⁴ has also been helpful in determining fetal lung maturation. In this test the formation of foam or bubbles in a vigorously shaken mixture of amniotic fluid and ethanol at 47.5 per cent concentration reflects the presence of an adequate amount of foam-forming surface-active material in the amniotic fluid.

Amniotic fluid analysis for fetal pulmonary maturity can be an extremely important diagnostic tool and is clinically useful for management of the fetus in utero. In the presence of clinical entities which may jeopardize either the maternal or fetal conditions or both, and if the amniotic fluid analysis indicates adequate fetal lung maturity, pregnancy can be terminated without fear of neonatal compromise by RDS. On the other hand, in cases where immature lung is present and there is no imminent maternal or fetal risk, the delivery of the fetus can be postponed until the fetal lungs become mature either by natural development of lung maturation or by pharmacologic induction.

TREATMENT

The pharmacological induction of fetal pulmonary maturation is a promising new development in the evolving story of RDS. Corticosteroids,¹⁶ thyroxine,¹⁷ and heroin¹⁸ have been shown to enhance fetal lung maturation when these agents were administered to the mothers prior to delivery. Recently, aminophylline has been shown to produce similar effects in the rabbit fetus.¹⁹ In human subjects, Liggins²⁰ has shown that maternal administration of betamethasone resulted in a lower incidence of RDS if the drug was given at least 48 hours prior to delivery. Although routine maternal administration of corticosteroids for the purpose of accelerating fetal lung maturation awaits additional

clinical trials, corticosteroid administration to the mother may be indicated in certain high risk pregnancies when delivery of an infant with otherwise immature lungs is imminent.

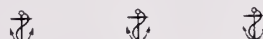
An important diagnostic procedure which may be used to predict the severity of RDS in the hyperoxia test.²¹ In this method the infant with RDS is allowed to breathe 100 per cent oxygen for 10 minutes, after which time an arterial PO₂ is obtained. If the PO₂ exceeds 200 mmHg, the severity of RDS is likely to be mild. On the other hand, if the PO₂ is below 200 mmHg, the infant is likely to have a severe course, and may require assisted ventilation, either in the form of continuous positive airway pressure (CPAP) or a respirator. Not only does this help in the early selection of those infants who are candidates for ventilatory assistance, but it may also be used to select those infants who will need transfer to a tertiary care facility before clinical condition deteriorates.

The recent advances made in the understanding of the etiology and pathophysiology of RDS as well as methods of prevention and diagnosis of RDS have been briefly summarized. Hopefully in the next few years this new body of knowledge will generate more ideal methods of prevention and management of RDS so that the morbidity and mortality of this disease may be reduced to its absolute minimum.

REFERENCES

- ¹Avery ME, Mead J: Surface properties in relation to atelectasis and hyaline membrane disease. *Am J Dis Child* 97:517-23, May 59
- ²Reynolds EOR, Robertson NRC, Wigglesworth JS: Hyaline membrane disease, respiratory distress, and surfactant deficiency. *Pediatrics* 42:758-68, Nov 68
- ³Scarpelli EM: Respiratory distress syndrome of the newborn. *Ann Rev Med* 19:153-66, Jan 68
- ⁴Gluck L, Kulovich MV: Lecithin sphingomyelin ratios in amniotic fluid in normal and abnormal pregnancy. *Am J Obstet Gynecol* 115:539-46, 15 Feb 73
- ⁵Kikkawa Y, Motoyama EK, Gluck L: Study of the lungs of fetal and newborn rabbits. Morphologic, biochemical and surface physical development. *Am J Pathol* 52:177-210, Jan 68
- ⁶Rudolph AM, Yuan S: Response of the pulmonary vasculature to hypoxia and H⁺ ion concentration changes. *J Clin Invest* 45:399-411, Mar 66
- ⁷Chu J, Clements JA, Cotton E, et al.: The pulmonary hypoperfusion syndrome. *Pediatrics* 35:733-42, May 65
- ⁸Hobel CJ, Hyvarinen MA, Oh W: Abnormal fetal heart rate patterns and fetal acid-base balance in low birth weight infants in relation to respiratory distress syndrome. *Obstet Gynecol* 39:83-8, Jan 72
- ⁹Thibeault DW, Hobel CJ, Kwong MS: Perinatal factors influencing the arterial oxygen tension in preterm infants with RDS while breathing 100 per cent oxygen. *J Pediatr* 84:898-902, Jun 74

- ¹⁰Sinclair JC, Engel K, Silverman WA: Early correction of hypoxemia and acidemia in infants of low birth weight: a controlled trial of oxygen breathing, rapid alkaline infusion, and assisted ventilation. *Pediatrics* 42:565-89, Oct 68
- ¹¹Hobel CJ, Oh W, Hyvarinen MA, et al.: Early versus late treatment of neonatal acidosis in low-birth weight infants: relation to respiratory distress syndrome. *J Pediatr* 81:1178-87, Dec 72
- ¹²Biggs JSG, Gaaney TJ, McGeary HM: Evidence that fetal lung fluid and phospholipids pass into amniotic fluid in late human pregnancy. *J Obstet Gynecol Br Commonw* 80:125-9, Feb 73
- ¹³Gluck L, Kolovich MV, Borer RC, Jr, et al.: Diagnosis of the respiratory distress syndrome by amniocentesis. *Am J Obstet Gynecol* 109:440-5, 1 Feb 71
- ¹⁴Clements JA, Platzker ACG, Tierney DF, et al.: Assessment of the risk of the respiratory distress syndrome by a rapid test for surfactant in amniotic fluid. *N Engl J Med* 286:1077-81, 18 May 72
- ¹⁵Cowett RM, Unsworth EJ, Hakanson DO, et al.: Foam stability test on gastric aspirate and a diagnosis of respiratory distress syndrome (RDS). *Pediatr Res* In press
- ¹⁶Kotas RV, Avery ME: Accelerated appearance of pulmonary surfactant in the fetal rabbit. *J Appl Physiol* 30:358-61, Mar 71
- ¹⁷Redding RA, Douglas WHT, Stein M: Thyroid hormone influence upon lung surfactant metabolism. *Science* 175:994-6, 3 Mar 72
- ¹⁸Taesch HW, Jr, Carson SH, Wang NS, et al.: Heroin induction of lung maturation and growth retardation in fetal rabbits. *J Pediatr* 82:869-75, May 73
- ¹⁹Karotkin EH, Cashore WJ, Kido M, et al.: Pharmacological induction and inhibition of lung maturation in fetal rabbits. *Pediatr Res* In press
- ²⁰Liggins GC, Howie RN: A controlled trial of antepartum glucocorticoid treatment for prevention of the respiratory distress syndrome in premature infants. *Pediatrics* 50:515-25, Oct 72
- ²¹Thibeault DW, Emmanouilides GC, Nelson RJ, et al.: Patent ductus arteriosus complicating the respiratory distress syndrome in preterm infants. *J Pediatr* In press



E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON. Phar. D.
RAYMOND E. JOHNSTON. B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

Book Review

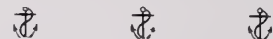
CLINICAL PERINATOLOGY: Edited by Silvio Aladjem and Audrey K. Brown. Saint Louis, The C. V. Mosby Company, 1974. \$39.50

As pointed out by the co-editors of this book, perinatology is a new specialty emerging rapidly to fill the gap between obstetric and pediatric disciplines in focusing the total care of the fetus and newborn both in health in disease. The outstanding feature of this book is the perinatal approach to the discussion of each section. The approach is particularly effective when the emphasis is placed on pathophysiology in relation to symptomatology and treatment of each disease entity. The information provided by most chapters is current and factual and should be useful to obstetricians and pediatricians, as well as to paramedical personnel involved in perinatal care. As in true in most multi-author books, one shortcoming of *Clinical Perinatology* is a difference in writing style and different levels of excellence of various chapters. However, as a whole the book is well edited and mostly well written by the individual authors, and the references provided in each sector are adequate as a source of additional information on each of the subjects.

The co-editors stress in their preface that completeness was not and could not be their goal. Yet, there are other important perinatal subjects, discussion of which would have been very useful to interested readers. Topics such as resuscitation of the newborn, specific metabolic disorders such as hypocalcemia and hypoglycemia, and the problems of infants of diabetic mothers should probably be dealt with in more detail in future revisions.

In summary, *Clinical Perinatology* is a good addition to the increasing number of books and monographs related to perinatal medicine and should be added to the medical library collection.

WILLIAM OH, M.D.



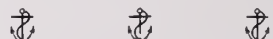
FIORINDO A. SIMEONE

(Concluded from page 89)

gical Oncology and Assistant Professor of Surgery at Case Western Reserve University.

In 1967 Doctor Simeone returned to Providence at the request of his Alma Mater to become Professor of Medical Science, the first Leader (Chairman) of the Section of Surgery of the Medical Program of Brown University and Surgeon-in-Chief of The Miriam Hospital. His counsel and wisdom have contributed greatly to the development of the medical program, and we are confident that they will continue to do so for the next two decades. We salute him as a dedicated and compassionate physician, an inspiring teacher, and a scholarly contributor to medical knowledge.

R. W. H.



CLOTTING FACTORS IN BURN SEPSIS

(Concluded from page 126)

with severe thermal injury. Abstract No. 60, 6th Annual Meeting. Cincinnati, Ohio, Amer Burn Asso Apr 4-6, 74

⁵DesPrez RM, Horowitz HI, Hook EW: Effects of bacterial endotoxin on rabbit platelets. I. Platelet aggregation and release of platelet factors in vitro. *J Exp Med* 114:857-74, 1 Dec 61

⁶Mustard JF, Packham MA: Factors influencing platelet function: adhesion, release and aggregation. *Pharmacol Rev* 22:97-187, Jun 70 (713 ref.)



PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in

INDEX MEDICUS giving author (co-authors up to three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.

Disruptive anxiety usually meets its match here.

Often effective when reassurance and counseling are insufficient. Three dosage strengths to meet most therapeutic needs.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, extreme caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions:

ORAL: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six.

INJECTABLE: Keep patients under observation, preferably in bed, up to three hours after initial injection; forbid ambulatory patients to operate vehicle following injection; do not administer to patients in shock or comatose states; use reduced dosage (usually 25 to 50 mg) for the elderly or debilitated and for children age twelve or older.

ORAL AND INJECTABLE: Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating compounds such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual



precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduc-

tion; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. **Oral: Adults:** Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. **Geriatric patients:** 5 mg b.i.d. to q.i.d. (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

Supplied:

Oral: Librium® (chlordiazepoxide HCl) **Capsules**—5 mg, 10 mg, 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50, available singly and in trays of 10.

Libritabs® (chlordiazepoxide) Tablets—5 mg, 10 mg and 25 mg—bottles of 100 and 500.

Injectable: Librium® (chlordiazepoxide HCl) **Ampuls**—Duplex package consisting of a 5-ml dry-filled ampul containing 100 mg chlordiazepoxide HCl in dry crystalline form, and a 2-ml ampul of Special Intramuscular Diluent (for I.M. administration). Before preparing solution for I.M. or I.V. administration, please consult package insert for instructions on preparation and administration of solutions. Boxes of 10.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Librium® (chlordiazepoxide HCl)

5 mg, 10 mg, 25 mg capsules

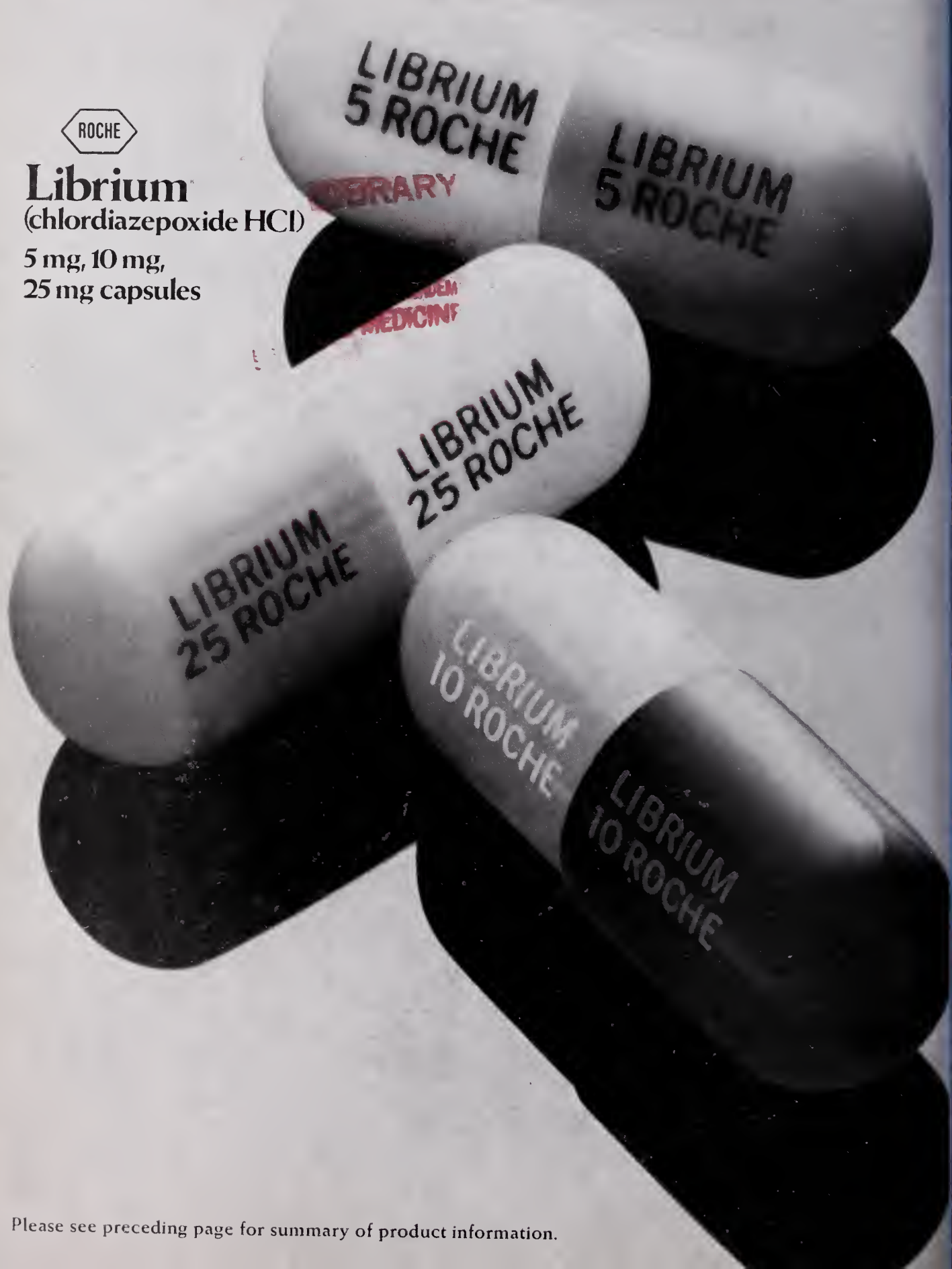
Please see following page.

Disruptive anxiety usually meets its match here



Librium
(chlordiazepoxide HCl)

5 mg, 10 mg,
25 mg capsules



Please see preceding page for summary of product information.

April 1975
R.I. Medical Journal

Vol. 58 No. 4

ALCON



RENAL DISEASE

Both often



Predominant
psychoneurotic
anxiety

Associated
depressive
symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Use with caution in alcohol-addicted individuals under care.

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam) 2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

APRIL, 1975

VOLUME 58, No. 4

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.

—o—

*John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
*Stanley M. Aronson, M.D.	*Charles A. Hall, Jr., M.D.
*Bertram H. Buxton, Jr., M.D.	Robert V. Lewis, M.D.
Robert P. Davis, M.D.	*Peter L. Mathieu, M.D.
*John A. Dillon, M.D.	*Jay M. Orson, M.D.
*Herbert Fanger, M.D.	Henry T. Randall, M.D.
	*Guy A. Settigane

(*Also Member Publications Committee)

TABLE OF CONTENTS

TREATMENT OF END STAGE RENAL DISEASE IN RHODE ISLAND: A STATUS REPORT	
Serafino Garelli, M.D., F.A.C.P., Joseph A. Chazan, M.D., F.A.C.P., and Sewell I. Kahn, M.D.	151
HEMATURIA	
Tobias M. Goodman, M.D.	156
PSYCHO-ACTIVE MEDICATION AND LEARNING PROBLEMS IN CHILDREN	
Wilson Utter, M.D., Maurice Laufer, M.D., Hector Jaso, M.D., Eric Denhoff, M.D., John E. Farley, Jr., M.D., William O'Neil, M.D., Joseph Barrett, M.D., and Herman Marks, M.D.	159
A SURVEY OF PHYSICIANS IN RHODE ISLAND AND AN EVALUATION OF NEEDS	
Robert V. Lewis, M.D., Pierre M. Galletti, M.D., Ph.D., Martin J. O'Brien, M.D., Ann Pagliarini, R.N., Robert P. Lawton, and Ronald R. Belair	161
EDITORIALS	166
PRESIDENT'S PAGE	137
THE DOCTOR AS A REVOLUTIONARY: NEXT TWENTY FIVE YEARS	
Peter L. Mathieu, Jr., M.D., FAAP	175

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island, Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

MEDICAL EVENTS CALENDAR

Wednesday, May 7, 1975

MINOR ORAL SURGICAL PROCEDURES

Dr. J. Henry Stempien
Assistant Clinical Professor of Oral Surgery
Veterans Administration Hospital

Veterans Admin. Hospital
Auditorium & Dent. Clinic
9:00 a.m.-4:30 p.m.

Friday and Saturday, May 9, 10, 1975

Annual Meeting of:

AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS (THE
NORTHEASTERN SECTION)

Brown University
List Art Building

Tuesday, Wednesday and Thursday, May 13, 14, 15, 1975

THE FOURTH ANNUAL SURGEON-IN-CHIEF, PRO TEMPORE PROGRAM and ROBERT H. WHITMARSH ORATION

Roger Wms. Gen. Hospital

Tuesday, May 13 (Kay Auditorium)

10:45 a.m. PANCREATIC PSEUDOCYST

Robert Zeppa, M.D.
Professor and Chairman, Department of
Surgery
University of Miami, School of Medicine

11:45 a.m. UROLOGY AND NUCLEAR MEDICINE

William S. Klutz, M.D.

Wednesday, May 14 (Kay Auditorium)

8:00 a.m. SURGICAL MORTALITY AND MORBIDITY
CONFERENCE

Richard Kuhn, M.D.
Associate Director
Division of General Surgery and
John R. Stuart, M.D.
Director
Surgical Training and Education

10:00 a.m. G. I. BLEEDING

Alden Blackman, M.D.

Department of Medicine

11:00 a.m. WHITMARSH ORATION: PORTAL HYPERTENSION

Robert Zeppa, M.D.

Thursday, May 15 (Kay Auditorium)

10:00 a.m. NEWER CONCEPTS IN CHEMOTHERAPY

Robert Parks, Jr., M.D., Ph.D.
Professor of Medical Science

11:00 a.m. TRANSPHENOIDAL HYPOPHYSECTOMY

Toussaint LeClercq, M.D.

Division of Neurosurgery

Department of Surgery

12:00 noon CLINICOPATHOLOGICAL CONFERENCE

Robert Zeppa, M.D., and

Israel Diamond, M.D.

Chairman, Department of Laboratories

Wednesday, March 12, 1975 — May 14, 1975

BASIC NEUROPATHOLOGY

(Series of ten lectures)

Daniel P. Perl, M.D.

Miriam Hospital

Assistant Professor of Medical Science

Veterans Admin. Hospital

Room 2 — Auditorium

2:00 p.m.-3:00 p.m.

Friday, May 16, 1975

LEAD POISONING IN CHILDREN

John Graef, M.D.

Director, Medical Emergency Service

Children's Hospital Medical Center

Instructor in Pediatrics

Harvard Medical School

Roger Wms. Gen. Hospital

Kay Auditorium

10:30 a.m.-12:00 noon

Thursday, May 22, 1975

DO BORDERLINES CHANGE?

Gerald Adler, M.D.

Butler Hospital

Ruggles Room

4:30 p.m.-6:00 p.m.

Wednesday, May 21 — June 4, 1975

**SYSTEMATIC APPROACH TO PARTIAL DENTURE DESIGN
AND TREATMENT PLANNING**

Dr. Krishan K. Kapur

Associate Clinical Professor of Prosthetic Dentistry

Harvard School of Dental Practice

Dr. Vincent J. Oddo

Clinical Instructor in Prosthetic Dentistry

Harvard School of Dental Medicine

Veterans Admin. Hospital

Auditorium & Dent. Clinic

9:00 a.m.-4:30 p.m.

Thursday, May 29, 1975

**A HIERARCHY OF DEFENSE MECHANISMS:
EXPERIMENTAL RATIONALE AND UTILITY IN THERAPY**

George Vaillant, M.D.

Professor of Psychiatry

Cambridge City Hospital

Butler Hospital

Ruggles Room

4:30 p.m.-6:00 p.m.

Thursday, June 5, 1975

Rhode Island Thoracic Society* presents:
"OCCUPATIONAL LUNG DISEASE IN RHODE ISLAND"

Presiding: Robert E. Baute, M.D., Vice President

2:00 p.m. Welcome by James F. Valicenti, M.D.

President, Rhode Island Thoracic Society

2:10-3:30 p.m. Case Presentations

3:30-4:00 p.m. Coffee Break

4:00-5:00 p.m. ASBESTOSIS

Irving J. Selikoff, M.D.

Mt. Sinai Hospital School of Medicine

New York, New York

(*Medical Section, Rhode Island Lung Association)

Rhode Island Hospital

George Build. Auditorium

2:00 p.m.-5:00 p.m.

Friday, June 6, 1975

CYTOLOGY WORKSHOP:

CYTOLOGY OF SARCOMAS

Stephen I. Hajdu, M.D.

Pathologist

Memorial Hospital of Cancer and Allied Diseases

New York City

Brown University

Bio Med Center

85 Brown Street

9:00 a.m.-5:00 p.m.

Friday and Saturday, June 6, 7, 1975

BUTLER HOSPITAL ANNUAL SYMPOSIUM:

SHAPING THE FUTURE: PLANNING AND FUNDING FOR

MENTAL HEALTH CARE

Butler Hospital

President's Page

Annual Presidential Address

by Nathan Chaset, M.D.

Distinguished guests, speakers, colleagues, ladies and gentlemen:

When I was installed as President, approximately one year ago, I stated at that time that I was not going to tell you what I planned to do in the coming year, but I did promise to come back in one year and tell you what I had accomplished. I might say right off that nothing is accomplished in our Society without the tremendous effort and the unstinting cooperation of many people. I will give proper thanks to these people later in my talk. I am deeply grateful for their help during this past year.

It was apparent at the outset that our office was not up to standards of the community as far as salaries, pensions, disability insurance, plus a few other deficiencies — and this was one of my first objectives. I am pleased to say that these have been corrected and a further increase in salaries has recently been approved. I am sure those of you who have had occasion to visit our library or our executive offices last summer had the pleasure of being in air-conditioned comfort. Just consider for a moment how very pleased were the people who had to work there every day. As most of you know, we have had an evaluation of our Society by an American Medical Association survey team. This team then submitted a written report and also gave us a personal review of the report, we could exchange face-to-face views and clarify any obscure points. I should like to emphasize that this survey team informed us as to whom they wished to interview, and they persisted in that concept. They obtained their answers from the people they wanted to interview. We in no way directed their course of action. Some of our members have complained that they were not

consulted and not interviewed. I firmly believe this was as it should be, so we did get an unbiased and non-directed set of evaluations.

The report was in four sections — each covering a specific portion of the survey. I have assigned each section to a separate commissioner, and I have charged each to select his own committee to work with him. Preliminary reports have been submitted and have been reviewed by the Council of this Society. After proper discussion and evaluation, the findings will go to the House of Delegates for final approval. Implementation will then be another tremendous job and will be accomplished only by superlative efforts on the part of those involved. I know of no more democratic way of doing what is necessary for the welfare and future health of this Society. To those dedicated members who have so fully contributed, I offer my deep thanks.

There are many more goals which were reached in this past year, and I will avoid them in the interests of brevity and say sincerely how deeply thankful I am to all my committee chairmen and their associates for the great job done by all of them. It would be unfair of me to pick out one group above another, and most certainly all deserve equal thanks for jobs well done.

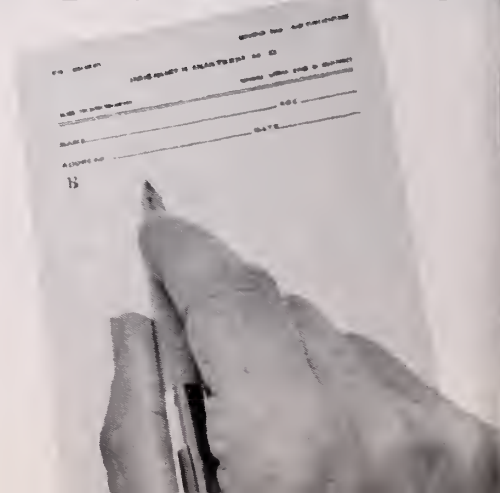
I should like to speak now about our professional liability insurance. As most of you know, I have been wearing two hats in this problem: as President of your Society and as Chairman of the Mediation Committee which handles these affairs. As I view this crisis situation, I feel we must maintain our coverage — even in the face of what seem to be inequitable conditions. I do believe we will eventually have insurance coverage which will be palatable to us, to the carriers, to our patients, and even to the legal profession. I have recently appointed an ad hoc committee charged with the sole task of coming forth with acceptable

(Continued on page 141)

Presidential Address delivered at the 164th Annual Scientific Assembly of the R. I. Medical Society, at the Chateau de Ville, Warwick, R. I., April 16, 1975.



Bioequivalenc



The weight of scientific opinion:

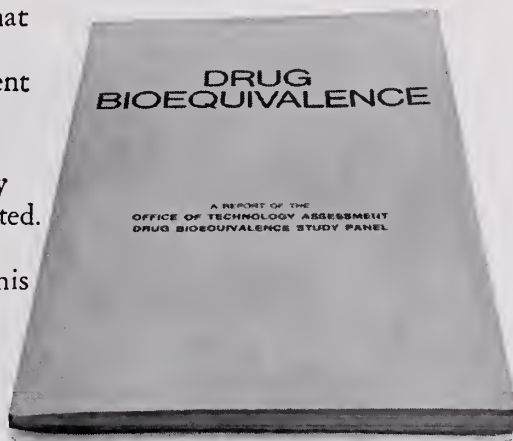
If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that patient's safety and effectiveness solely because the chemical content is the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has commented on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalence in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented inequivalences constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



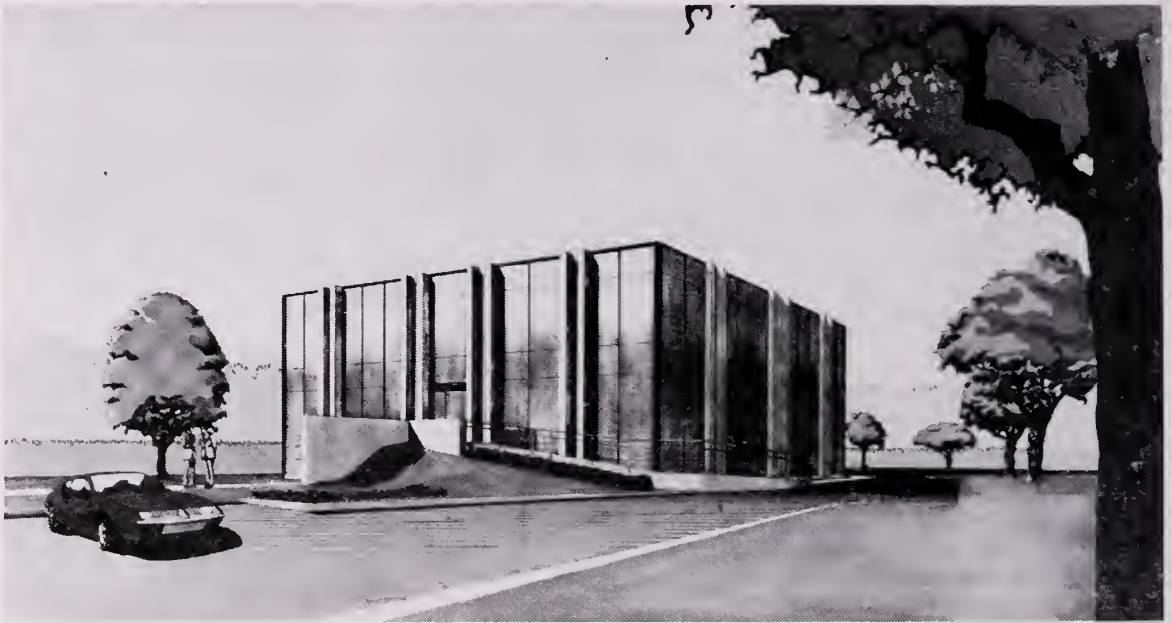
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

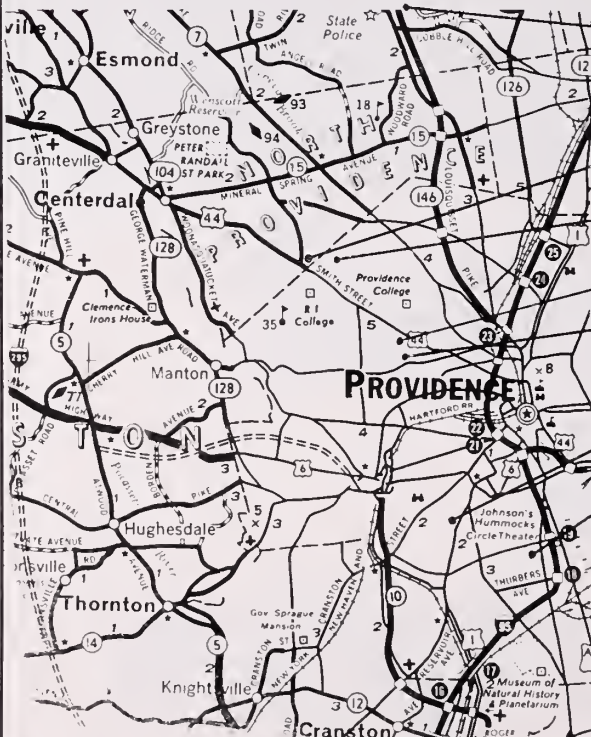
Protecting the integrity of your prescription

MEDICAL OFFICE BUILDING – SUITES AVAILABLE

- METROPOLITAN AREA
- ELEVATOR — WHEEL RAMPS
- AIR COOLED VENTILATED HEAT CYCLE
- X-RAY DEPT.-LAB-ALL CONVENIENCES
- REASONABLE
- LAVISH CONTEMPORARY DESIGN
- PARKING
- DIRECT BUS LINE



WELLESLEY OFFICE BUILDING
 1515 SMITH ST., NO. PROV., R.I.
 MANCINO ASSOCIATES ARCHITECTS



FOGARTY HOSPITAL

Wellesley Med. Bldg.

FATIMA HOSPITAL

LYING-IN HOSPITAL

**ROGER WILLIAMS
GENERAL HOSPITAL**

ST. JOSEPH'S HOSPITAL

RHODE ISLAND HOSPITAL

INQUIRIES

contact

353-1110

PRESIDENT'S PAGE

(Continued from page 137)

solutions to our problem. This committee is composed of representatives of all component societies and also of most areas of medical practice. I have further arranged for this committee to meet and work with all groups in our state interested in the delivery of health care plus the legal profession plus our academic confreres — medical and non-medical — and with legislators and consumers. I believe this super committee will produce interesting and workable solutions to this tremendous problem. If we can maintain our professional liability insurance for now and then come forth with solutions of a more equitable nature, we can look forward to the time when we can practice at a very high level of efficiency and our patients can benefit from this high level efficiency at a reasonable cost to them.

I should like now to try to project some of my thoughts concerning the future of this Society. I have mentioned the survey, and I firmly believe this offers us a blueprint for our future planning. I implore you to keep an open mind and work steadfastly for changes you believe in. Not everyone will be happy, but we will make decisions in a truly democratic way.

I believe this Society must be put on a sound financial base so we do not end up in the "red" and so that innovations or improvements need not be put aside for lack of funds. This can be accomplished in two ways. First of all, we must have an increase in dues. We are far below the average of most societies, and an immediate substantial increase is indicated. The other need is for all physicians in this state to become members of our Society. When we struggle so assiduously with our many problems, it is decidedly unfair for non-members to reap the benefits and sit on the financial sidelines and not even cheer. There should be some way these non-members could be compelled to become contributing members and help us bear the burden. I also firmly believe the same reasoning applies to membership in the American Medical Association. They and we work for all physicians regardless of whether they are members or not. No physician in this country is entitled to a free ride on the backs of fellow physicians.

It has been a great year and a most rewarding experience. I offer special thanks to the staff of the Rhode Island Medical Society for their hard

work and their devotion beyond the call of duty, and to our legal counsel for his valuable service and his great and sympathetic cooperation.

As I leave behind me this great and eventful year, I must emphasize that I am more than ever committed to organized medicine and look forward to continued participation in medical affairs.



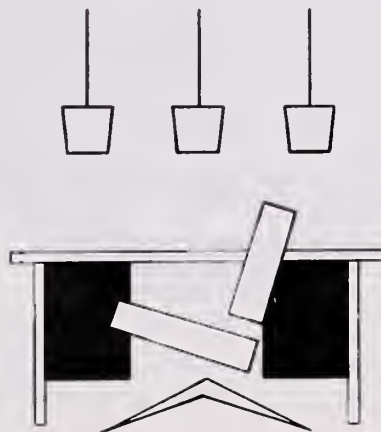
ACKNOWLEDGEMENT

We regret that through an oversight the following statement failed to appear in the March issue of the JOURNAL: Publication of this issue has been supported in part by friends of Doctor Simeone and Brown University.

Attractive & Functional Offices

by **BENÉ & CO.**

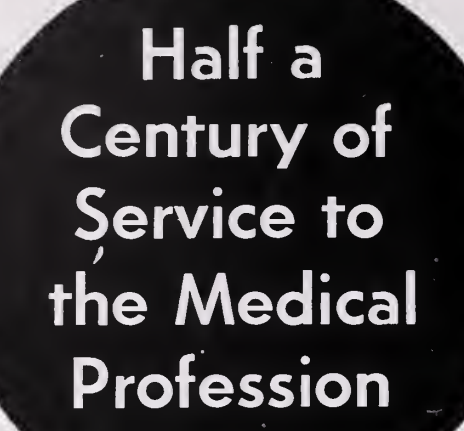
Division of National Office Supply Co.



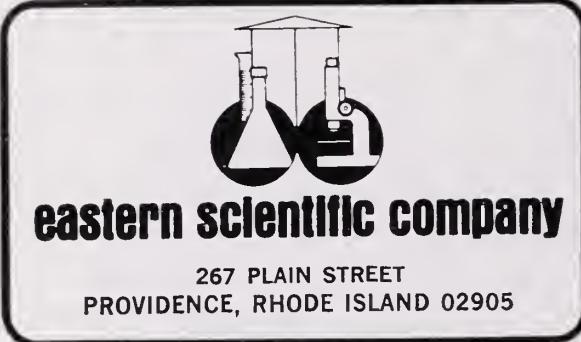
Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228



**Half a
Century of
Service to
the Medical
Profession**



267 PLAIN STREET
PROVIDENCE, RHODE ISLAND 02905

ONE CALL!
**Your complete
source of all
medical, surgical,
laboratory
needs**

**WOULD YOU LIKE OUR NEW
MEDICAL SUPPLY CATALOG?**

Call 421-4600

Doctors and Nurses

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue
Cranston, R. I. 02920
(401) 943-1884

(401) 943-1884

A black and white photograph of a modern house. The house features a large glass door and a decorative lattice screen. The house is surrounded by lush foliage, including a large bush on the left and a large tree on the right. A small garden area with a bench is visible in the foreground.

HEALTH HAVENS

A SKILLED NURSING HOME
MEDICARE PARTICIPATING



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited

IF YOU'RE SELF-EMPLOYED:

- **How not to pay taxes on up to \$7,500 with an INBANK retirement plan.**
- **How not to pay a sales commission on your retirement plan.**
- **How to earn the highest interest rate in INBANK history.**

You have probably heard or read about the new law that allows the self-employed to set aside up to 15% of earned income or \$7,500 (whichever is less) in a retirement plan. The money set aside is completely tax deductible, and the interest earned is not currently taxable. You pay income taxes only on receiving these funds during retirement. Then your tax bracket should be lower because of your retired status.

You qualify for this tax break if you operate an unincorporated business. So it's perfect for doctors, dentists, lawyers, artists, accountants, store owners, writers, dealers, carpenters, house painters and countless others.

• **INBANK's Retirement Savings Plan.**

There are two good reasons to set up your retirement plan with INBANK. First, unlike some other banks we won't charge you an initial fee for setting up your plan or an annual fee for running it. And INBANK's 7.50% six- to ten-year investment savings plan yields 7.90% with daily compounding. Accounts with shorter maturities and lower rates are available. The chart shows how much money the 7.50% account will mean to you. So stop in at any INBANK office and start your own retirement plan.

\$7,500 A YEAR CAN ACCUMULATE TO:		
After	With a tax-sheltered plan	Without a tax-sheltered plan
5 years	\$ 45,912	\$ 20,210
10 years	108,135	44,500
20 years	339,436	108,814
30 years	834,195	201,746

NOTE: Figures assume 50% income bracket and 7.50% rate of return

INBANK
Industrial National Bank
Something extra



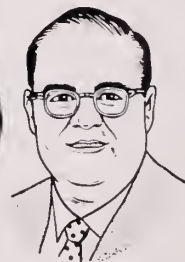
R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.



Pretend it's 1945. Would you invest in Kodak?



When it comes to making investment decisions, there's nothing like 20 or 30 years' hindsight.

And when it comes to judging the performance of your investments, it's the long term that counts.

The life of a trust represents years of investment decisions whose cumulative effect is far-reaching. And the record of Industrial National Bank's Trust Department is your best assurance that that effect will be positive one.

We take a back seat to no one in the business of professional

financial management. And we're proud of our consistent long-term performance record.

In fact, we'd like to discuss that record with you, and to show you how our combination of the right people, the right philosophy, and the right organization can bring a realistic new performance orientation to the management of your investments.

Call Mr. Evans at 278-6607.
Trust Department, Industrial
National Bank, 100 Westminister St.,
Providence, Rhode Island 02903.

IN BANK

Industrial National Bank

Something extra in Investment Management.

**We deal
exclusively
in the investment
opportunities
of tax free
state and
municipal
bonds.**



CAROLAN & CO. INC.

2401 HOSPITAL TRUST TOWER
PROVIDENCE, R.I. 02903, (401) 331-1932

POOLS BY AQUA FUN

**BUILDERS IN THE ART OF
CUSTOM POOLS**

Specializing In

**ONE PIECE FIBERGLASS POOLS —
NO SEAMS**

WITH SELF CLEANING POOL SYSTEMS

FREE FORMS —

DESIGN YOUR OWN POOL

VISIT OUR INDOOR DISPLAY POOL

384 Atwood Ave., Rt. 5

Cranston, R.I.

Tel.: 944-2010



Pro-Banthine®

brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE

Searle & Co.

San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 48

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine® (propantheline bromide)

a good
option
in peptic
ulcer

PAIN RELIEF FOR THE MAJORITY

NO.4—for pain intensity below the need for injectables

As a rule, only pain that requires morphine is beyond the scope of Empirin® Compound with Codeine No. 4. That's because it delivers a full grain of codeine. (In the preferred phosphate form.) Its antitussive action is particularly appreciated by patients with fractured ribs, and following chest or abdominal surgery. Its low addiction liability is a bonus for all patients who require potent analgesia.

NO.3—for almost all other kinds of lesser pain

Most other kinds of lesser pain respond to Empirin Compound with Codeine No. 3—whether musculoskeletal, neurological, soft-tissue or visceral. One might say No. 3 is an "all-purpose" analgesic — not too little, not too much. Just right for your out-patients in these categories.



Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

BURNS

Wherever it hurts

EMPIRIN® COMPOUND \bar{c} CODEINE

No.3, codeine phosphate*(32.4 mg) gr $\frac{1}{2}$ · No.4, codeine phosphate*(64.8 mg) gr 1

*Warning — may be habit-forming.

Each tablet also contains aspirin gr $\frac{3}{2}$, phenacetin gr $2\frac{1}{2}$, caffeine gr $\frac{1}{2}$.

fore prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities.

Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or on diuretics). If hyperkalemia develops, substitute thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, granulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting may indicate electrolyte imbalance; diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH **DYAZIDE**[®]

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.

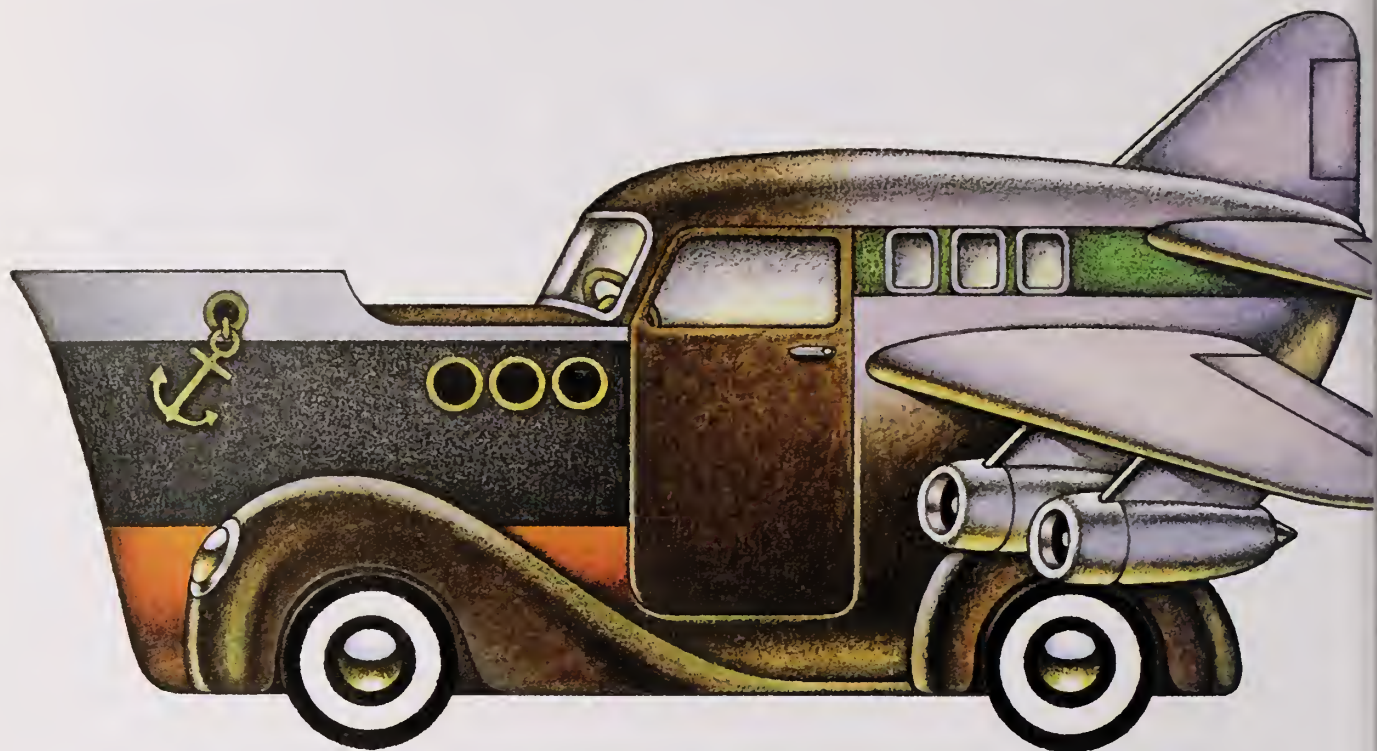
Trademark

Neither inconvenient potassium supplements nor special K⁺ rich diets needed as a rule. Just 'Dyazide' once or twice daily for maintenance.



Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP



On land, sea, and in the air...

Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.

Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did

not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 
 A division of Pfizer Pharmaceuticals
 New York, New York 10017

Antivert[®]/25 Chewable Tablets
(meclizine HCl) 25 mg.
for motion sickness

Hopkins

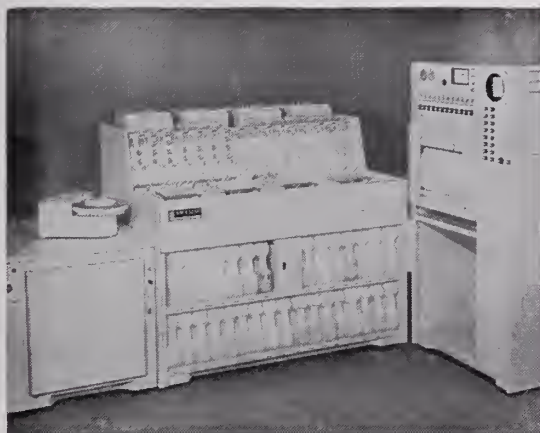
Profile "20"

Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

Malpractice protection is serious business!

Talk only to the experts!

And let them speak for you. By all means, discuss your treatment with your patients during treatment. But should a patient's lawyer want to speak to you about your treatment, don't put yourself at a disadvantage. Let lawyers talk to lawyers. Refer him to the legal counsel for your professional liability insurance company.

And when it comes to malpractice liability insurance, talk to the Man from Starkweather & Shepley. As a leading agency for the St. Paul Insurance Company, he can provide you coverage up to \$1 million. In fact, he can provide you with a total insurance program covering all your professional and personal needs.

Yes, talk to your patients about medicine, let the Man from S & S talk to you about insurance and let the insurance company lawyers talk about law.

Contact Gardner C. Borden, C.P.C.U.



Starkweather & Shepley, Inc.
155 South Main Street
Providence, R. I. 421-6900

ONE SOURCE / TOTAL INSURANCE

BUTLER HOSPITAL ANNUAL SYMPOSIUM

Shaping the Future: Planning and Funding for Mental Health Care/June 6-7, 1975

SYMPOSIUM MODERATOR — *Judd Marmor, M.D.*, President-Elect,
American Psychiatric Association

FEASIBILITY AND IMPLICATIONS OF INSURANCE FOR MENTAL
HEALTH
Henry A. Foley, Ph.D.

INFLUENCE OF FINANCING ON THE PRIVATE PRACTICE DELIVERY
SYSTEM
Robert W. Gibson, M.D.

DEVELOPMENT OF AN INTEGRATED MENTAL HEALTH DELIVERY
SYSTEM
William Goldman, M.D.

THE MISSING LINK IN MENTAL HEALTH CARE — THE PATIENT
Mike Gorman,

Registration fee of \$30.00 includes all sessions and coffee breaks. Friday
lunch will be an additional \$5.00 (Saturday sessions will be completed by
1:00 pm.)

Limited full scholarships for students and \$10.00 scholarships for residents
and interns are available. Deadline for reservations is May 10, 1975.

THIRD PARTY PAYERS, CURRENT STATUS AND FUTURE
ALTERNATIVES

Robert J. Laur, Ph.D.

ACCOUNTABILITY IN PSYCHIATRIC PRACTICE, PSRO AND UTILIZA-
TION REVIEW

Scott H. Nelson, M.D.

COMMUNITY MENTAL HEALTH IN ENGLAND
Norman Rosenzweig, M.D.

FEDERAL LEGISLATION AND MENTAL HEALTH CARE
Honorable William R. Roy, M.D., LL.D.

For registration forms and further information write:

Butler Hospital Annual Symposium

333 Grotto Avenue, Providence, Rhode Island 02906 (401) 521-3400

BUTLER HOSPITAL, A Brown University Member Hospital

DeFelice

Realtors

DIAGNOSIS: CUSTOM DESIGNED MEDICAL
AND PROFESSIONAL OFFICES FROM 600 TO
3,200 SQ. FT. IN SUBURBAN CRANSTON ON
SCENIC OAK LAWN AVENUE.

PROGNOSIS: YOUR PRACTICE OR BUSINESS
WILL GROW AND PROSPER IN THIS EXCEL-
LENT LOCATION.

RX: CALL 738-6000 AND HAVE OUR PROP-
ERTY MANAGER COMPOUND A REMEDY FOR
YOUR OFFICE SPACE PROBLEMS.

Student Health Physician — September opening, full time at Brown University. Share general medical care of students and emergency care of faculty and employees.

Prerequisites: Board certification or eligibility — preferable in family medicine, internal medicine, or pediatrics. Experience in a college or University student health service preferred.

Competitive salary and good benefits. Reply with curriculum vitae to:

ROSWELL D. JOHNSON, M.D., Director
Brown University Health Services
P. O. Box 1928
Providence, R. I. 02912

AN EQUAL OPPORTUNITY AND AFFIRMATIVE ACTION EMPLOYER

FOR SALE

Two Family House in Fine location, Smith Street , 6 Large Rooms on each floor. Across Street from Women and Infants Hospital and near Roger Williams General Hospital. Ideal for Doctor. Seen by Appointment. Call 421-3152.

NOTTE & NOTTE
ATTORNEYS AT LAW
111 Westminster Street
Providence, Rhode Island 02903

Do You Prescribe Modified Diets?



Patients often need help adapting a diet to their personal needs and preferences. At the Diet Counseling Service a registered dietitian will make your prescribed diets more individualized — more effective.

A Physician's Referral is necessary. For more information call Diet Counseling Service 728-9660.

Kefzol[®]

cefazolin sodium

Ampoules, equivalent to 1 Gm. of cefazolin



Lilly

Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206
400380

Treatment Of End Stage Renal Disease In Rhode Island: A Status Report

The Treatment of Renal Failure Has Undergone A Dramatic Change Since The Advent Of Chronic Hemodialysis

By Serafino Garella, M.D., F.A.C.P., Joseph A. Chazan, M.D., F.A.C.P. and Sewell I. Kahn, M.D.

Chronic intermittent hemodialysis has been utilized for the treatment of patients with chronic renal failure since 1960, when Scribner and his coworkers¹ demonstrated its feasibility and efficacy. Although initially this mode of treatment was reserved for a few highly selected patients, during the past several years the criteria for acceptance of patients in chronic hemodialysis programs have widened considerably, and it is estimated that at present approximately 16,000 patients with terminal uremia are being maintained on chronic hemodialysis in the United States.

In Rhode Island chronic hemodialysis was first introduced in 1967 at the Veterans Administration Hospital. Since only Veterans could be treated at this institution, chronic hemodialysis became available to all Rhode Island residents only with the opening of the Rhode Island Hospital Dialysis Unit in January 1971. Up to that time all non-veteran residents who required dialysis were referred to out-of-state units, mostly in the Boston area, and commuting three times a week was necessary for maintenance of life. Subsequently two additional units have opened in the state: The Miriam Hospital Unit began operations in October 1971 and the Artificial Kidney Center of Rhode Island, an out-of-hospital Satellite Dialysis Unit (associated

with the Rhode Island Hospital), opened in April, 1973. At the present time there are 42 individual beds for chronic hemodialysis in the state, which are used to treat 107 patients.

Because of the medical and socioeconomic impact that the availability and rapid expansion of hemodialysis services has had and will continue to have on the community for the foreseeable future, we wish to report on our experience for the past three-and-a-half years. Particular attention will be devoted to our results, to the pattern of referral of patients with chronic renal failure from various areas of the state, and to prospects for the future.

PATIENT DATA

The Rhode Island Hospital Dialysis Population. A total of 115 patients have been accepted for chronic hemodialysis at the Rhode Island Hospital's Dialysis Unit from January 1971 to August 1974. Dialysis is uniformly initiated at the Rhode Island Hospital; after a 1-6 month period of stabilization, and as new patients enter the program, the patients are transferred to the Satellite Unit. Only the data relative to the 88 patients admitted before December 31, 1973 will be evaluated in this section to allow a minimum of 8 months follow-up on each patient.

Table 1 details some pertinent clinical data on this population of 88 patients. As can be seen, there are more females than males (ratio 3:2). The

(Continued on next page)

From the Division of Renal Diseases, Rhode Island Hospital, and the Division of Biological and Medical Sciences, Brown University.

Table 1
CLINICAL DATA ON RHODE ISLAND HOSPITAL
DIALYSIS POPULATION (Jan. 1971-Dec. 1973)

Total Patients	88
Males	36
Females	52
Mean Age (years)	45.7
Age Range (years)	7-75
Presence of Severe Extrarenal Disease	22

mean age at admission was 45.7 years and was approximately equal for males and females. The age range, from 7 to 75 years, and the presence of severe extrarenal disease in 22 of the 88 patients reflect the liberalization of criteria for eligibility. In previous years hemodialysis might not have been offered to the 29 patients who were over the age of 65, the 13 patients who had diabetes mellitus, the 4 patients who had multiple myeloma, the 3 patients with evidence of severe arteriosclerotic heart disease or of previous cerebrovascular accidents, and the 2 patients with previous diagnosis of psychosis.

The diagnosis of the disease process responsible for the development of uremia is listed in Table 2. It will be noted that in 27 patients a precise etiologic diagnosis was not reached, reflecting the fact that many patients are found at referral to have evidence of slowly progressive chronic renal disease and radiologic evidence of bilaterally small, shrunken, unobstructed kidneys. This combination of findings rules out the presence of a reversible or treatable cause, and under these circumstances a renal biopsy is usually not carried out. It is probable, however, that most of these patients suffer from common causes of chronic renal failure such as chronic glomerulonephritis, nephrosclerosis, or chronic interstitial nephritis. The second most common entity in our series is that of diabetic nephropathy, followed by the biopsy-proven diagnosis of chronic glomerulonephritis, either of the membranous, proliferative, membranoproliferative, or lobular variety. Inherited lesions, mainly polycystic kidney disease and hereditary glomerulonephritis, are responsible for 10 other patients. It is somewhat surprising to note that at least nine patients in our series suffered from various forms of vasculitis, and that obstructive uropathy which had resulted in end-stage renal disease was responsible for renal failure in only five patients.

An average mortality rate² of 10 per cent per year was observed (Fig. 1). These data were obtained after excluding six patients who died during the first several weeks of treatment, since it is generally accepted that death during this initial period

Table 2
ETIOLOGY OF RENAL DISEASE IN THE
RHODE ISLAND HOSPITAL DIALYSIS
POPULATION

Chronic Undifferentiated Renal Failure	27
Diabetic Nephropathy	13
Chronic Glomerulonephritis	11
Vasculitis (SLE, Henoch Schoenlein, Wegener's Granulomatosis)	9
Polycystic Kidney Disease	6
Obstructive Uropathy (Congenital or Acquired)	5
Hereditary Glomerulonephritis	4
Myeloma Kidney	4
Various (interstitial nephritis, amyloidosis, rapidly progressive glomerulonephritis, oxalosis, malignant hypertension)	9

Table 3
REHABILITATION OF PATIENTS ON CHRONIC
HEMODIALYSIS

	Good	Fair	Poor
Females	24	20	8
Males	17	11	8
Total	41 (47%)	31 (35%)	16 (18%)

reflects the fact that the patients' condition was so unstable as to prevent therapy from being effective, and since in most cases death was caused by concurrent extrarenal disease.

It is gratifying to observe that our survival rate is comparable to that reported by the National Dialysis Registry³, and to that of patients on home dialysis (a preselected population) reported from the Peter Bent Brigham Hospital in Boston⁴, despite the liberal criteria for admission described above.

Rehabilitation and Use of Hospital Facilities. Although it is virtually impossible to quantitate rehabilitation satisfactorily, an estimate of the degree of rehabilitation was attempted. Results are shown in Table 3. Rehabilitation was defined as "good" (47 per cent of patients) when, after several months of treatment, the patients' subjective sense of well-being and medical condition were such that they returned, or could have returned, to perform essentially the same functions as they had been performing before becoming uremic or requiring dialysis. In many instances, especially in the aged, these activities were limited to enjoying retirement and did not include full-time employment. In some instances, although patients were fully rehabilitated medically, they were unable to return to gainful employment because of restrictive employment policies. "Fair" rehabilitation (35 per cent of patients) was defined as the capacity to perform some, but not all, of the functions performed before the onset of renal disease.

"Poor" rehabilitation, implying that patients continued to need assistance even for personal needs, occurred in a relatively small number (18 per cent of the patients).

Another criterion which may give an indication of the adequacy of treatment is the need for hospitalization while patients are on chronic hemodialysis. In our series it was observed that, after acceptance into the program, patients spent on the average 20 days per year in the hospital. These data, however, should be interpreted with caution, since, when the data are observed in greater detail, it can be shown that approximately 70 per cent of all in-hospital days were accounted for by only 17 patients, who had prolonged, repeated hospitalizations. By contrast, the remaining 71 patients had average hospital stays of only seven days per year while on dialysis. These statistics emphasize not only that most patients on chronic hemodialysis can be partially or totally rehabilitated, but also that they require relatively low rates of hospitalization.

Transplantation. It is not the purpose of this study to discuss in detail the immediate and long-range results of transplantation, other than to state that 29 of the patients in our series were transplanted. Of these, 13 received kidneys from living related donors, and 16 received cadaveric kidneys. In nine patients (31 per cent) the transplanted kidney failed between six hours and 17 months after transplantation. Nine kidneys from living-related donors and 11 from cadaveric donors are still functioning. The overall transplantation-

related mortality rate in these patients was 14 per cent. Therefore it is apparent that, although renal transplantation is an accepted mode of therapy, the immediate and long-term results are at best comparable and in some situations perhaps worse than those of chronic hemodialysis^{4, 5}.

Home Dialysis. The rate of home dialysis training in the treatment of patients with chronic renal failure varies from center to center. In those centers where the feeling is that home dialysis has specific medical, social, and economic advantages over in-center dialysis^{6, 7}, a high percentage of patients is trained for home dialysis. It must be recognized, however, that home dialysis usually requires the attendance of a family member during the treatment. In addition to the emotional burden that this family member (most frequently the spouse) must share, he or she also must be willing and able to spend a considerable amount of time at the bedside, with consequent loss of time available for work or other duties. In our opinion individuals can be convinced to undertake training for home dialysis only when they are offered no alternative means of treatment, when a significant financial loss attends in-center dialysis, or when the distance to the dialysis center is prohibitive. Since Rhode Island is a relatively small state, the latter condition seldom arises. The availability of institutional dialysis and of federal funding have recently removed the other two major practical considerations in favor of home dialysis. During our three-and-a-half year experience, 10 patients have been trained for home dialysis, and, unless present funding practices change dramatically, we anticipate that home dialysis will continue to be employed by a relatively small number of patients on hemodialysis.

PATTERNS OF PATIENT REFERRAL

The rate of referral of patients for chronic dialysis therapy depends on several factors, such as the prevalence of renal disease, the accessibility of physicians to patients, the readiness with which patients seek medical advice, the attitude of physicians themselves regarding the criteria for dialysis, and the awareness of existing dialysis facilities.

The State of Rhode Island, because of its relatively small population and its compact size, lends itself ideally to a demographic analysis of dialysis requirements. We have analyzed the number of patients referred for treatment of uremia according to the community of origin of the patients.

(Continued on next page)

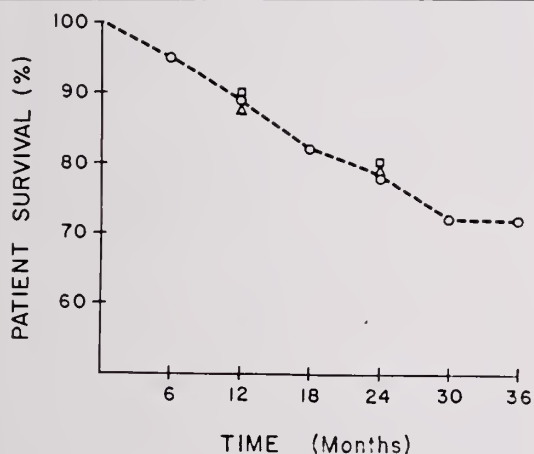


Figure 1

Survival rates of patients on chronic intermittent hemodialysis

- Rhode Island Hospital series
- National Dialysis Registry Report, 1972 (Ref. 3)
- △ Peter Bent Brigham Hospital series for patients on home dialysis, 1973 (Ref. 4)

Table 4
TOTAL NUMBER OF RHODE ISLAND RESIDENTS BEGUN ON HEMODIALYSIS, AND RATE OF REFERRAL OF PATIENTS, ACCORDING TO DIFFERENT GEOGRAPHICAL AREAS, BETWEEN JANUARY, 1971 AND AUGUST, 1974

	Population (1970 Census)	Total patients referred	Rate per 100,000 in 44 months	Rate per million per year
Area 1*	203,453	45	22.1	60
Area 2	151,796	24	15.8	43
Area 3	140,165	14	10.0	27
Area 4	191,881	25	13.0	36
Area 5	112,424	14	12.5	34
Area 6	85,706	11	12.8	35
Area 7	72,187	10	13.9	38
Total	949,723	143	15.1	41

- *Area 1: Providence, North Providence
Area 2: Pawtucket, East Providence, Central Falls
Area 3: Bristol County, Newport County
Area 4: Cranston, Warwick, West Warwick, East Greenwich
Area 5: Woonsocket, Smithfield, North Smithfield, Lincoln, Cumberland
Area 6: Washington County
Area 7: Burrillville, Glocester, Foster, Scituate, Johnston, Coventry, West Greenwich

In order to obtain a more representative picture, the data compiled in this section include not only the patients referred to the Rhode Island Hospital, but also those referred to The Miriam Hospital and the Veterans Hospital from January 1971 to August 1974. No Rhode Island resident has been started on dialysis outside of Rhode Island since 1971. Those Rhode Island residents who prior to that date were being dialyzed in neighboring states have since returned to Rhode Island for their treatment. In addition, 19 patients from southeastern Massachusetts and from Connecticut now find it more convenient to be dialyzed in Rhode Island. Therefore the following data can be assumed to reflect the total dialysis experience in Rhode Island for this three-and-a-half year period.

A total of 143 Rhode Island residents were started on dialysis between January 1971 and August 1974. For demographic purposes the state was broken down into seven areas as follows: 1) Providence and North Providence; 2) Pawtucket, Central Falls, East Providence; 3) Bristol and Newport counties; 4) Cranston, Warwick, West Warwick, and East Greenwich; 5) Woonsocket, Smithfield, North Smithfield, Lincoln, and Cumberland; 6) Washington County; and finally 7) the communities that constitute the western part

Table 5
RATE OF PATIENT REFERRAL FROM DIFFERENT AREAS OF THE STATE OF RHODE ISLAND DIVIDED IN AGE GROUPS PER 100,000 POPULATION, DURING THE STUDY PERIOD OF 44 MONTHS

Age Ranges (years)	<44	45-64	>65
Area 1*	12.6	41.8	31.6
Area 2	8.9	34.4	21.0
Area 3	3.9	28.6	28.3
Area 4	8.1	23.9	19.5
Area 5	6.7	23.2	24.6
Area 6	7.8	30.0	31.5
Area 7	9.9	25.9	15.8

*See Table 4 for the identification of the various geographical areas

of the state, including Burrillville, Glocester, Foster, Scituate, Johnston, Coventry, and West Greenwich.

This division into groups of communities was necessary in order to obtain blocks which had a population large enough (Area 7 with 72,187 population being the smallest) to lend themselves to statistical analysis. In addition, it allowed us to compare the results observed in urban (Areas 1 and 2), mixed urban and suburban (Area 3) mostly suburban (Area 4), mixed urban and rural (Area 5), and predominantly rural environments (Areas 6 and 7). The results are detailed in Table 4. The greatest number of patients, both in absolute and relative terms, was referred from the Providence-North Providence area; 45 patients, corresponding to 22.1 patients per 100,000 population were referred from this area during the study period of 44 months. This corresponds to a yearly rate of 60 per million population. The rate of patient referral from the remainder of the state, with the exception of Area 3 (Bristol and Newport Counties), varied from 12.5 to 13.9 per 100,000 population per 44 months. It is apparent that in general there was an inverse relationship between the distance from the treatment centers and the frequency of patient referral, with little effect being attributable to the difference in the type of setting. The only obvious exception to this general rule is Area 3, Bristol and Newport Counties, whose rate of referral was clearly lower than that of any other area. In an attempt to determine whether the lower prevalence of referrals from this area may have been related to a difference in the age distribution of the population in the different areas, we calculated the prevalence of referral of patients from each area in relation to different age ranges. It then became apparent that the lower rate of referral of patients from Bristol and New-

port Counties was almost entirely attributable to a very low number of patients less than 44 years of age being referred from this area. In this age group (Table 5) the referral rates from most other areas in the state were between 6.7 and 9.9 per 100,000 population, and that from the Providence-North Providence area was 12.6, while the Bristol-Newport Counties referral rate was only 3.9. Although the reason for this discrepancy remains obscure, it may be related in part to the presence in the area of a large population group under 44 years of age which has military status. This military population is screened for chronic disease.

If one assumes that the referral rate of patients from the Providence-North Providence area is truly reflective of the prevalence of chronic renal disease treatable with dialysis, the conclusion must be that a still fairly large number of patients with renal disease seen in other parts of the state are not receiving optimal treatment. In fact, if the referral rate observed in Providence-North Providence (of 22.1/100,000 population/44 months) had been observed in the rest of the state, the total input of patients would have been 210 patients rather than 143.

PROSPECTS FOR THE FUTURE

The rapid growth of requirements for dialysis services during the last several years has shown no tendency to abate, and in fact it appears still to be rising. In 1971, 21 patients were accepted in the Rhode Island Hospital program, 25 in 1972,

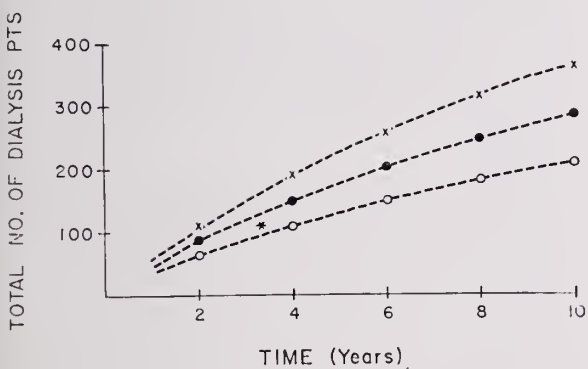


Figure 2

Total projected number of patients treated with chronic intermittent hemodialysis. See text for description of assumptions used in making the projections. The asterisk represents the number of Rhode Island residents presently being treated, after 44 months experience. The three different curves reflect a different number of new patients entering the program per year:

- × 70 new patients per year
- 55 new patients per year
- 40 new patients per year

43 in 1973, and, during the first eight months of 1974, 35, for a yearly rate of 53 patients.

Previous estimates of the rate of presentation of new candidates for dialysis have ranged between 18 and 75 new patients per million population per year⁸⁻¹⁰. Since these estimates were based on projections made several years ago when the criteria for acceptability into a dialysis program were more stringent, it is probable that the rates based on present criteria will approach the higher figure of 75 new patients per million population per year.

On the basis of our experience and of these predictions we constructed a computer program (Figure 2) to predict the number of patients which could be expected over the next several years in the State of Rhode Island (population about one million). Of course these predictions are valid only if no major changes occur in either the technology of treatment of renal failure or the results of transplantation. These projections were calculated by assuming that 30 per cent of all patients will be candidates for transplantation, either from related living donors or from cadaveric donors, with an average waiting time of one year between onset of dialysis and transplantation. The transplant failure rate, which is followed by reentry into the dialysis program, was estimated at 15 per cent per year. Survival was estimated for patients on dialysis at 90 per cent per year, and for trans- asterisk demonstrates that after 44 months of operation of the program the observed data fall within the prediction at 107 patients. By 1980 there may be a minimum of 200 and a maximum of 360 patients on dialysis, depending on whether the input will level off at 40 new patients per year, which is unlikely, or rise to the more realistic figure of 70 per year.

At this time in-center dialysis costs approximately \$150 per treatment for a total yearly cost of \$23,400 per patient. In addition one should add expenses for occasional hospitalization. Based on the projected figure of 70 new patients per year one would predict that between five and nine million dollars per year would be expended for the care of patients with chronic dialysis in the State of Rhode Island. These figures multiplied by 250 will give an idea of the expected yearly dialysis expenses for the United States. It should be noted that, starting in July 1973, 80 per cent of all expenses of chronic hemodialysis are covered by Medicare. This is the result of federal legislation which, in recognition of the potential economic

(Continued on page 168)

Hematuria

Hematuria Is A Sign Of Grave Disease Unless Proved Otherwise

By Tobias M. Goodman, M.D.

Hematuria that is not associated with pain or other uncomfortable symptoms may often be overlooked by a patient or treated lightly by his physician. The following case demonstrates the significance of urinary bleeding in a relatively young and healthy man.

CASE REPORT

A 43-year-old Caucasian man took his young son for a motorcycle ride over a rough road. That evening the man noticed that his urine was red-brown. There were no other associated symptoms. He stated that his general health was excellent, although he had been hospitalized for tonsillitis in 1952. Physical examination was entirely unremarkable. Routine laboratory studies were all within normal limits, except for 10 to 12 red cells per high powered field in the spun urinary sediment. Three urinary Pap smears were negative. An intravenous pyelogram demonstrated a filling defect in the right renal pelvis. Following right nephroureterectomy, the pathology report on the surgical specimen was transitional cell carcinoma of right renal pelvis, grade III.

BLOOD IN THE URINE

The term hematuria implies the presence of blood in the urine, either in gross or microscopic amounts. In concentrations of up to one part blood

in 125 parts urine, hematuria may be recognized on visual inspection.¹ Although some red cells are present in the urine normally, it is often stated that over two red cells per high-powered microscopic field represent significant hematuria.^{2,3} It should be remembered that lysis of red cells can occur in urines of low osmolality or high pH.⁴ Free hemoglobin in urine is detected by a dipstick test (Labstix®, Ames) in which orthotolidine and peroxide impregnated on a cellulose strip develop a blue color when exposed to hemoglobin. Reportedly, up to one part blood in 50,000 parts urine may be detected by this method.⁵ Both the microscopic examination of the spun urinary sediment and the dipstick test should be employed routinely.

Urine of red color may not contain erythrocytes. Ingestion of rhodamine-B, an intense food dye, produces a pink or red color in the urine, particularly in children.⁶ Beeturia (betacyaninuria) is an inherited disorder seen in the homozygote. An orange-red color is produced by phenazopyridine hydrochloride (Pyridium®, Warner-Chilcott). Urine discoloration in porphyria is well known. Urine passed after ingestion of alpha-methyldopa produces a red color in the toilet bowl after mixture with hypochlorite found in commercial cleansing preparations.⁷ In alkaline urine phenosulfonphthalein may cause red-pink discoloration. Rhubarb causes red-pink color in alkaline urine. Hemoglobinuria may cause a reddish color.

Urine should be collected carefully for labora-

TOBIAS M. GOODMAN, M.D., *Department of Surgery, Westerly Hospital, Westerly, Rhode Island*

Table 1

SOME CAUSES OF HEMATURIA

I. Diseases of the Urinary Tract

A. Kidney

tumor	lupus erythematosus
cyst	A-V fistula
calculus	hemangioma
trauma	malignant hypertension
tuberculosis	anaphylactoid purpura
pyelonephritis	Goodpasture's syndrome
glomerulonephritis	Alport's syndrome
polycystic kidney	sickle cell trait
medullary sponge kidney	benign familial hematuria
necrotizing papillitis	hydatid disease of kidney
renal arterial embolism	renal biopsy
renal vein thrombosis	renal angiography
acute tubular necrosis	renal artery aneurism
radiation nephritis	foreign body
polyarteritis nodosa	hydronephrosis

B. Ureter

tumor	congenital malformation
calculus	hydroureter
trauma	ureteritis cystica
tuberculosis	endometriosis

C. Bladder

tumor	schistosomiasis
calculus	interstitial cystitis
trauma	neurogenic bladder
tuberculosis	hemangioma
cystitis	amyloidosis
foreign body	radiation therapy
diverticula	endometriosis

D. Prostate

prostatitis	tuberculosis
hyperplasia (varices)	trauma
carcinoma	congenital valves

E. Urethra

tumor	caruncle
calculus	stricture
trauma	diverticulum
urethritis	foreign body

II. Other diseases

A. Hematologic

eg: idiopathic thrombocytopenic purpura
polycythemia vera
leukemia
hemophilia

B. Infections

eg: malaria
typhoid

C. Drugs and poisons

eg: heavy metals
cantharides
methicillin
venoms
anticoagulants

D. Gastrointestinal

eg: appendicitis
ileitis
diverticulitis

E. Carcinoma

eg: female genital
colon

F. Others

eg: psychogenic (factitious)
stress
hypervitaminosis C

tory analysis; contamination with red cells from menstrual flow should be avoided (true hematuria

during the menstrual period implies the presence of endometriosis somewhere in the urinary system).

ETIOLOGY OF HEMATURIA

Red cells in the urine may originate from anywhere in the urinary tract, from the uppermost calyx to the urethral meatus. Some causes of hematuria are listed in Table 1. In the majority of patients hematuria is due to infection, inflammation, tumor, obstruction, or calculus.⁸ Among patients with this sign men outnumber women by two to one. In the older age groups virtually 100 per cent of patients presenting with hematuria have demonstrable genitourinary disease.⁹ In a series of 163 young men aged 18-30 years, 26 had serious disease, 22 required surgery, and four had bladder neoplasms.¹⁰ Among children the most common causes of hematuria are glomerulonephritis and cystitis.^{11, 12} Hematuria is not an uncommon clinical sign at any age.

Seven to 13 per cent of the American black population are heterozygous for hemoglobin-S. The relationship between sickle cell trait and hematuria is well documented and thought to be due to sickling in the renal papilla under physiological conditions of low oxygen tension, high osmolality, and acidity.¹³ This situation may be suspected in any black patient with painless hematuria. The diagnosis is confirmed by hemoglobin electrophoresis, since the sickle cell preparation may be negative in trait disease.¹⁴

Hematuria which occurs during anticoagulant therapy may still herald urinary tract disease. In one small series of patients receiving anticoagulant drugs, 82 per cent had demonstrable genitourinary disease including carcinoma and calculus.¹⁵ Urologic evaluation is necessary when patients under such therapy develop hematuria.

Some families are characterized by benign hematuria inherited as an autosomal dominant trait.¹⁶ So-called stress hematuria may be documented by changes following rest and exercise and is thought to occur in activities such as long distance running.¹⁷

Careful examination of the urinary sediment may be helpful. The presence of red cell casts and proteinuria suggests an inflammatory renal etiology for hematuria. Pieces of tissue passed may be helpful. Fragmented villous fronds stem from transitional cell tumors. A piece of renal papilla points to papillary necrosis. White cells without casts do not aid in localization.

(Continued on next page)



Figure 1.

CLINICAL FINDINGS

There is often little relationship between the duration, frequency, or degree of hematuria and the nature of the causative disease process. A bladder tumor may bleed only once or on multiple occasions, in small or in large amounts. Nevertheless, some clinical inferences are possible. Massive hemorrhage may often derive from benign prostatic hyperplasia, bladder neoplasm, or trauma. Very large clots also suggest a vesical origin, while worm-like clots may indicate a renal or ureteral source. In males, if blood is present in the urine stream from beginning to end (total hematuria), complete mixing of urine and blood from kidney, ureter, or bladder has taken place. Bleeding noted during the final expulsion of urine (terminal hematuria) may have originated in the prostatic urethra or bladder neck. Initial hematuria implies a urethral lesion. Bleeding from the urethral meatus, independent of urination, is from a source distal to the external urinary sphincter.

Pain in the flank with radiation to the groin may occur with a renal or ureteral etiology. Irritative or obstructive symptoms during voiding may give some indication of lower tract disease. Painless hematuria should always be taken to mean neoplasm unless proved otherwise. However, prostatic carcinoma, in contradistinction to benign

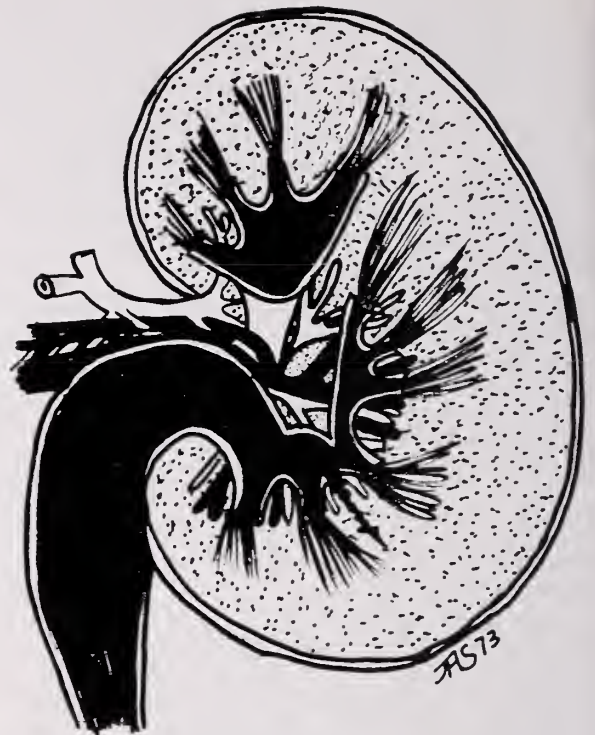


Figure 2.

prostatic disease, is an uncommon cause. Similarly, 40 per cent of patients with renal cell carcinoma do not have blood in their urine.¹⁸ It should always be kept in mind that in a very large proportion of cases of renal tuberculosis painless hematuria is the presenting sign.

Hematuria is not a reliable index of the presence, absence, or severity of renal injury in blunt abdominal trauma. A serious cortical laceration with a large perirenal hematoma and unstable vital signs may not connect with the calyces so that no blood is present in the urine (Fig. 1). However, a small injury to the lining of the collecting system may cause dramatic gross hematuria (Fig. 2). Hematuria following minimal injury to the flank suggests pre-existing pathology or congenital malformation.

EVALUATION OF PATIENTS WITH HEMATURIA

A careful history and physical examination often provide substantial clues to the diagnosis. Historical investigation should include inquiry into previous active tuberculosis, exposure to drugs or toxins, gout, diet, familial history of renal disorders, previous systemic illness, and daily activities, as well as genitourinary symptoms. Detailed general and urologic physical examination should include auscultation of both flanks, pal-

(Continued on page 169)

Psycho-Active Medication And Learning Problems In Children

Psychostimulant Medication Has A Definite Place In The Management Of Children With Attentional Control Problems

By An Ad Hoc Committee of the Rhode Island Medical Society on Psycho-Active Medication in Children*.

Learning disorders and behavioral difficulties affect a significant number of school children in most communities.

Physicians caring for children have a responsibility in this matter. Families can be referred to a psychiatric resource if the presenting problem is behavioral. If a learning disorder is evident, it deserves the same response as any other diagnostic problem. Physicians should also be willing to act as an advocate for the child in a school situation, so that the pupil receives all the educational assistance available, while the physician is attempting to remedy the other contributing factors.

Some children with learning disorders are handicapped primarily by distractibility and overactivity. This may be their only problem, but in most cases there are accompanying disturbances in processing information. Distractibility affects learning by limiting the amount and quality of information which can be incorporated by the child's cognitive capacity.

Distractibility can stem from many sources ranging from chronic illness, cultural disparity, poor teaching, to a host of emotional factors. Some chil-

dren have evidence of central nervous system factors as a background for attentional control problems.

Psychoactive stimulants are a useful and accepted treatment in certain of these children. Some physicians prefer to use environmental manipulation alone however.

When properly administered these medications have few important side effects. Recently there have been studies suggesting that psychostimulants have a transient retarding effect on growth. Many authorities question the methodology of the study.

Children on psychoactive medication should have their height and weight closely monitored. If a slowing of growth is observed, this fact must be balanced against whatever positive responses have been demonstrated in any decision to continue the medication. This declaration, if observed, is usually transient and is followed by a 'catch-up' in growth according to most clinicians who have had long experience in observing children on these medications. There has been some concern based on animal research about the potential effects on central nervous system development in long-term administration of psychostimulants. There has as yet been no substantiation of this in human subjects.

Most authorities believe that this type of therapy should always involve concern for the child's educational program, while efforts should be made to

(Continued on next page)

*Committee Members:

John E. Farley, Jr., M.D., Chairman	Maurice Laufer, M.D.
Joseph Barrett, M.D.	Herman Marks, M.D.
Eric Denhoff, M.D.	William O'Neil, M.D.
Hector Jaso, M.D.	Wilson Utter, M.D.

provide parents with more understanding of their child's functioning. Also an attempt at remediation of any existing physical or emotional problem is necessary.

DIAGNOSTIC APPRAISAL

The child with a learning disorder or behavioral problem deserves an expert diagnostic appraisal. This may be accomplished best by a physician whose main interest is in the care of children, whose formal training included a considerable segment devoted to pediatric neurology and psychiatry, and who has a specific interest in this subject. Much practical information and research data are easily available to the interested physician, but helping these children requires sufficient time and definite involvement. Continuing experience in this clinical field is also essential.

A social and developmental history is a requirement for understanding overactivity and distractibility. This history should contain information about the child's home environment and relationship with parents and siblings and stresses affecting the family.

The child's educational history and achievement levels as well as performance on intelligence tests are necessary for a diagnostic assessment. These tests should be repeated regularly to assess progress.

There is some disagreement concerning the minimal evaluation needed for children with problems involved in distractibility. An "expanded" pediatric neurological examination is indicated both to aid in prognosis and suggest to what degree impulsiveness and distractibility interfere with performance. The traditional neurological examination does not seem as fruitful as a more specific pediatric neurologic technique such as suggested by Rabe,¹ Goldfarb,² Ozer,³ and Twitchell.⁴ These methods suggest prognosis and at times educational clues, besides enabling the observer to assess the degree to which impulsivity may be a factor in the child's dysfunction.

The "expanded" pediatric neurological evaluation is not intended primarily to delineate evidence of classical central nervous system damage, but instead attempts to profile present function. This is compared with established norms, and the degree of divergence appears to have correlation with the concept of developmental or transient learning problems. The greater the number of signs of divergence, the more likely is the problem to be persistent.

An electroencephalogram (EEG) as performed and interpreted in the usual setting is usually not too helpful, and is not necessary for all children with these problems. Recent studies of evoked potential EEGs suggest that this procedure may eventually be of help in evaluating some of these children. The equipment for this type of study is not at present locally available.

There is much disagreement concerning the contribution of psychological testing procedures other than that of intellectual functioning in the evaluation of a child with a learning disorder. Certainly projective testing performed by a clinical psychologist is in order if an emotional problem is suggested by other assessments.

Because psychiatric aspects of distractibility and learning disorders in general are sometimes of crucial importance, some authorities believe that a psychiatrist could be the primary physician for the child with a problem, whereas others suggest that a psychiatric investigation is ancillary. Most believe, however, that the practitioner should always be aware that anxiety or depression can cause distractibility, overactivity, or other specific varieties of learning disorders.

The diagnostic appraisal outlined above can be carried out by a physician with the help of the school psychologist. If the situation is complicated or the physician lacks time or interest to complete the necessary time-consuming studies, referral to a multidisciplinary team should be considered. This team should consist of a pediatric neurologist, a child-psychiatrist, an educational psychologist, and a social worker. A special educator with training and interest in learning disabilities may be included.

LACK OF FACILITIES

Currently there are very few facilities providing this kind of service available in Rhode Island. The medical community should encourage the establishment of contemporary multidisciplinary learning centers in our hospitals and educational training centers. To illustrate the magnitude of this problem, over 90 per cent of the admissions to a pediatric diagnostic clinic in a large local hospital involved school-related complaints. There is an urgent need for an adequate number of these model diagnostic clinics.

It is quite important if medication is used as a treatment that it be fully explained to the parents and in a simple way to the child. Points to be included are: 1) Side effects are usually limited to

(Continued on page 170)

A Survey Of Physicians In Rhode Island And An Evaluation Of Needs

Particular Attention Should Be Paid To Raising Substantially The Number Of Primary Care Physicians

By a RIHSEC Subcommittee* on Physicians in Rhode Island

Assuming no major change in the Rhode Island health delivery system and the demands made upon it, the state will need 383 new physicians during the next five years. According to criteria of need adopted by the authors who served as Subcommittee on Physicians of the Rhode Island Health Science Education Council (RIHSEC), Rhode Island should have 256 more primary care physicians and 127 more physicians in the specialties of anesthesiology, dermatology, neurology, obstetrics/gynecology, ophthalmology, otolaryngology, physical medicine, psychiatry, radiology, and urology. The other specialties are in ample or possibly excess supply.

Based on recent experience, nearly 400 new physicians might decide to establish practice in Rhode Island by 1980. However, because the majority of them are likely to be oriented toward specialty practice, the influx of new physicians is unlikely to meet the need for more primary care physicians.

*ROBERT V. LEWIS, M.D., Chairman
PIERRE M. GALLETTI, M.D., Ph.D.
MARTIN J. O'BRIEN, M.D.
ANN PAGLIARINI, R.N.
ROBERT P. LAWTON, Secretary
RONALD R. BELAIR, Research Associate

This report of the subcommittee on physicians and the criteria of need for physicians has been approved and released by the Rhode Island Health Science Education Council.

1974 INVENTORY OF PHYSICIANS

A 1974 inventory indicates that there are 1,476 doctors of medicine and osteopathy licensed and in active clinical practice in the state.¹ In addition there are 22 physicians who limit their activities to public health, full-time teaching or administrative medicine. Furthermore, 309 of Rhode Island's licensed physicians who are technically in an active status, are over 65 years of age, and 148 of these are already past 70¹. While some of these older doctors still maintain a full and active practice, others do not or are actually retired. Therefore, if the number of active physicians is adjusted to allow for the inactivity or limited practice of the group over 65, the inventory of active physicians is reduced to 1,167.

With regard to the future, the members of the Subcommittee felt that the report's classification of physicians over 65 as inactive, while arbitrary, might prove to be conservative, since the complexities of malpractice insurance, professional standards review, and relicensure will unquestionably induce many physicians to retire before age 65. Compared to the adjusted inventory of 1,167, the estimated need for 383 new practitioners thus translates into an increase in the supply of physicians in the state of about 33 per cent.

ASSUMPTIONS OF THE STUDY

This study is based on an inventory of Rhode
(Continued on next page)

Island physicians as of the start of 1974. In the minds of its authors it represents an approximation of physician manpower needs in the light of information available at a specific point in time. Its conclusions will undoubtedly be refined as more accurate statistical instruments become available.

The findings of the study are predicated upon the present system for the delivery of health services in Rhode Island. They are not adjusted to recognize the possibility of the enactment of national health insurance or other major changes in the method of providing health care in the future.

The study does take into consideration the state's demographic characteristics, most particularly the fact that the population is not increasing but is growing older. Rhode Island has apparently reached zero population growth. Over 13 per cent of its population will be past 65 by 1980, compared to 11 per cent in the nation as a whole.³

The Subcommittee's survey addresses itself to the supply and need for physicians in the entire state. It does not mean to imply that there are no actual or potential imbalances in certain specialties in individual communities throughout the state. Local ratios in primary care and in several of the specialties, such as obstetrics/gynecology, orthopedics, psychiatry, surgery and the hospital based specialties of anesthesiology, pathology and radiology will be examined more closely in a subsequent study. However, Rhode Island's small size and the fact that it has centralized most of its tertiary health services in Providence justifies the initial statewide approach.

The inventory of active physicians came from licensure data collected by the Bureau of Professional Regulation of the Rhode Island Department of Health. The gross total of 1,476 physicians was classified as to type of practice according to the information entered by the physicians on their original Rhode Island licenses and which continued to be recorded in 1974. Those conducting the study found it necessary, to some degree, to regroup the specialists into the classifications which are in common usage today and which are used in this report. This was done through a cross-check of directories and rosters and by individual conversations with many physicians as to their type of practice. Starting with the 1975 licenses, physicians are required to identify their practices more precisely according to the specialty classifications in current use. When these data become available it will be possible to update the current study. However, the findings which are published

at this time are felt to represent a sufficient approximation of the type of practice of the active physician population in Rhode Island in 1974.

There were 379 interns, residents, fellows, and other holders of a special license in Rhode Island at the time of the inventory.¹ These individuals are not included in the inventory of practicing physicians because they are still in training and most of them do not treat a significant number of patients not already under the care of private physicians.

CRITERIA OF NEED

There are no universally accepted criteria of need of the population for the services of physicians and other health professionals which can be applied to the present health system or to its hypothetical future modifications. Thus a prospective evaluation of needs must rely on the numbers of physicians who actually practice in ratio to the population, and a few criteria which have been developed as baselines.

Therefore, the Subcommittee first considered for each type of practice the ratio of physicians to population in Rhode Island as compared with the nation. These actual ratios were then placed in parallel with the few recommended ratios which have been developed to date. Having compared and studied these statistics and these ratios, the investigators have proposed ratios for physicians in Rhode Island, based on their joint opinion regarding the particular needs in our state, and their perception of the adequacy or inadequacy of physicians services as they are provided under the system of health care which exists in Rhode Island at this time.

COMPARATIVE RATIOS

If one counts all fully licensed physicians, Rhode Island has nearly 153 per 100,000 population, compared to a comparable national ratio, including inactive physicians, of 156.² However, as indicated in Table A, if one adjusts the inventory to deduct those already over 65 in Rhode Island, the Rhode Island ratio drops to 120 per 100,000, compared to a national ratio of active physicians in clinical practice of 145.² The national ratio of 145 contains all non-federal physicians, including osteopaths and also including Veterans Administration physicians, who are active in patient care, and it also contains the resident physicians in training. The Rhode Island ratio of 120 includes all of the same physicians who are 65 or under,

RHODE ISLAND HEALTH SCIENCE EDUCATION COUNCIL

TABLE A

Comparisons of Selected Criteria and the Actual Numbers of Physicians in Practice by Specialty—
per 100,000 Population

	Average of 5 Group Health Plans 1970	J. G. Steinle 1971	"Medical Economics" 1973	Florida Baseline Ratios—R. P. Lawton 1973	Section of Surgery—Brown Med. Ed. Prog. 1971-1972	United States Average 1973*	Rhode Island 1974**	Rhode Island 1974—Age 65 and Under**
Primary Care	59.0	55.9	76.0 ^a	80.0		64.0	77.1	56.1
Dermatology	2.1		2.5	2.0		1.9	2.1	1.5
Neurology .....	.7		1.7	1.0		1.5	.7	.7
Neurosurgery	1.1		1.0	1.0	1.0	1.3	1.4	1.3
OB/GYN	9.7	8.3	9.0	10.0	7.0	8.9	10.0	8.0
Ophthalmology	2.5	4.0	5.0	5.0	4.0	4.7	3.4	2.8
Orthopedics	3.3	4.6	4.0	5.0	4.0	4.6	6.7	5.4
Otolaryngology	2.4	2.0	4.0	3.0	4.0—	2.4	2.6	2.1
Pediatrics								
(In Primary Care)	(16.9)	(8.3)	(10.0)	(10.0)		(8.3)	(11.7)	(10.5)
Physical Medicine	1.0			1.0		.7	.5	.5
Psychiatry	2.1 ^a	8.3 ^b	10.0	10.0		10.3	10.4	9.4
Surgery	7.8	12.5	13.0	15.0	16.0 ^d	15.0	18.7	15.1
Urology	1.7	4.0	3.3	3.0	3.0+	2.8	2.0	1.5
Anesthesiology		3.3	7.0		7.0+	5.5	6.3	5.5
Pathology		3.3	5.0			4.3	4.3	4.0
Radiology		3.3	6.7			6.7	6.6	6.3
Anesthesiology, Pathology and Radiology Combined	5.8			15.0				
Specialty Unknown						10.6		
TOTAL	99.2	109.5	148.2	151.0		145.2	125.8 ^e	120.2 ^f

PRIMARY CARE includes: General and Family Practice, Internal Medicine and its sub-specialties, Pediatrics and the Osteopaths.

SURGERY includes: General Surgery and its sub-specialties—Colon and Rectal, Plastic and Thoracic.

NOTATIONS: a—Adjusted to eliminate overlap of family practitioners and internists.

b—Restricted psychiatric services.

c—Includes neurology.

d—Includes one plastic, one thoracic surgeon.

e—Based on 1476 physicians in patient care.

f—Based on 1167 physicians, age 65 and under, in patient care.

*Based on an estimated U.S. civilian population of 208,820,000 as of July 1973, U.S. Bureau of the Census.

**Based on an estimated population of 970,000 as of January 1974. R. I. Office of Statewide Planning.

except the residents. If the residents were included, the Rhode Island ratio would be 144.

Table A also displays the ratios developed by various investigators and agencies. It includes the average staffing of five large group health plans⁴, some ratios developed by Steinle⁵ and some published by Medical Economics.⁶ Also cited are the Florida Baseline Physician Ratios⁷ and the ratios in a report from the Section of Surgery of the Brown Medical Education Program.⁸ Table A also shows the numbers of physicians in practice at the present time, for the United States² and for Rhode Island.¹ The ratios of physicians in Rhode Island in 1974 are displayed in the two righthand columns. The first of these contains all licensed physicians classified as being in "active" practice. The second column contains the active clinicians who are 65 or younger. The same information relative to Rhode Island is displayed in Table B in absolute numbers rather than as ratios, for the purpose of comparison with the recommended criteria of need. These data, modified by the investigators' perception of Rhode Island's particular require-

ments for medical care, were used to develop the ratios for the Rhode Island Health Science Education Council (RIHSEC) and they have been labelled the RIHSEC Ratios.

RIHSEC RATIOS FOR RHODE ISLAND

The recommended RIHSEC ratios for physicians in primary care and the specialties in Rhode Island are the essence of this study. They are exhibited in Table B, as are the numbers of physicians required to fill these ratios. This table also shows the number of active practitioners 65 or younger in each category and indicates whether there is currently a shortage or excess, based on the recommended ratios.

According to the recommended criteria, there is a major shortage in primary care, and a numerically less important shortfall of dermatologists, neurologists, obstetrician/gynecologists, ophthalmologists, otolaryngologists, psychiatrists, psychiatrists, urologists, anesthesiologists, and radiologists. Some of these shortages are small and possibly not significant. General surgeons are thought

(Continued on next page)

**RHODE ISLAND HEALTH SCIENCE
EDUCATION COUNCIL**

TABLE B

Rhode Island's Needs for Physicians by RIHSEC
Ratios in 1980—Estimated Population=970,000*

Specialty	RIHSEC Ratios	Total Required	Total in Practice in R. I. 1/1/74	Total in Practice 65 and Under 1/1/74	Excess (+) or Shortage (-) Compared to Total in Practice 65 and Under
Primary Care ..	80.0	776	715	520	-256
Dermatology	2.0	19	20	15	- 4
Neurology	1.5	15	7	7	- 8
Neurosurgery ..	1.2	12	14	13	+ 1
Ob/Gyn	9.5	92	91	78	- 14
Ophthalmology ..	4.5	44	33	27	- 17
Orthopedics	5.0	49	65	52	+ 3
Otolaryngology ..	3.5	34	25	20	- 14
(Pediatrics)	(10.0)	(97)	(114)	(102)	(+ 5)
In Primary Care					
Physical					
Medicine	1.2	12	5	5	- 7
Psychiatry	12.0	116	101	91	- 25
Surgery	15.0	146	173	140	- 6
Urology	3.0	29	19	15	- 14
Anesthesiology ..	7.0	68	61	53	- 15
Pathology	4.0	39	42	39	....
Radiology	7.0	68	64	61	- 7
TOTAL	156.4	1519	1435¹	1136²	383

*Estimated Rhode Island population, adjusted, for 1980 is 973,800 per Rhode Island Office of State-wide Planning.

¹—Forty-one physicians in the sub-specialties of Internal Medicine, Plastic Surgery and Thoracic Surgery are not included.

²—Thirty-one physicians (under 66) in the sub-specialties of Internal Medicine, Plastic Surgery and Thoracic Surgery are not included.

to be in sufficient number to match the population's needs. There is thought to be an adequate or slightly excessive numbers of neurosurgeons, orthopedists, pediatricians and pathologists.

The report anticipates a need for 776 physicians in primary care in 1980, compared with the 520 physicians under 66 who are active in this type of practice at the present time. In this study, primary care includes physicians in general practice, family practice, general internal medicine, pediatrics and most of the osteopaths. Internists engaged in specialty care such as cardiology, nephrology, etc. are not included under primary care. The study also suggests that, in the primary care group, pediatricians already exceed the recommended ratio of physicians to population. Therefore the shortage in primary care is among those who are engaged in general practice, family practice, internal medicine and osteopathy.

The study suggests that the number of derma-

tologists in active practice should be raised from 15 to 19 to meet the national average of dermatologists per 100,000 population. Some feel this ratio might in itself be insufficient.

The recommendation to increase to slightly more than double the current population of seven neurologists not only reflects the study's findings that neurologists are in shorter supply than in the nation at large but the fact that the aging of the population and the increasing incidence of stroke might call for more consulting neurologists.

An increase of 14 in the number of obstetricians/gynecologists (OB/GYN) is recommended in spite of the decline in births in Rhode Island. The study group noted that the number of OB/GYN physicians presently in practice was below the national average and below the ratios recommended by others.

Ophthalmologists practice in Rhode Island in lesser numbers in proportion to the population than they do nationally and the study recognizes the need for 17 additional ones. The greater need is also influenced by the increase in the average age of the population and their need for a greater amount of eye care.

The committee found a deficit in otolaryngologists and recommended they be increased by 14 which would bring the total substantially above the national average, but still below the ratios proposed in other studies cited in Table A.

The large and growing number of Rhode Islanders in long term care facilities accentuates the need for a significantly expanded program of rehabilitation. This is an aspect of medicine which generally is not practiced to its potential in this state or nationally. Therefore the study group recognizes a need for the relatively high increase of seven psychiatrists or other specialists in rehabilitation medicine.

While psychiatrists practice in Rhode Island in nearly the same ratio to population as prevails in the nation, the study recommends 25 additional psychiatrists to provide more mental health services throughout the state. As is the case in the United States generally, the need for psychiatrists is particularly great in community mental health facilities.

The growing number of Rhode Islanders of older age who are likely to develop urological problems led to the recommendation for 14 additional urologists, raising the total number in the state to 29.

This increasing need has also been expressed by other consultants and manpower specialists.

In the hospital based specialties, the number of anesthesiologists was thought to be inadequate, and the shortage was attributed in part to the termination of the graduate training program in anesthesiology at the Rhode Island Hospital. The investigators felt that there is a heavy administrative, as well as clinical, load on the anesthesiologists now in practice and that the numbers of these specialists should be increased by 15 to meet the patient care needs.

The inventory of pathologists does not include non-physicians who are in fact actively engaged in clinical pathology in several institutions in the state. The ratios, moreover, are limited to physicians engaged in anatomical, clinical, and forensic pathology. Although the current supply seems to meet present needs, the emergence of specialty practice in pathology may call for some future adjustment of the recommended ratio.

Radiologists seem to be in fairly adequate supply when compared with the national statistics and an increase of only seven is recommended at this time. However, it is no longer realistic to consider the specialties of diagnostic radiology, nuclear medicine and radiation therapy as a single group. Radiation therapists need to concentrate in a certain number of specialized facilities. So, to a lesser extent, do specialists in nuclear medicine. The need for diagnostic radiologists is likely to be influenced by the emergence of specialty practices in neuroradiology, cardiovascular radiology, pediatric radiology, etc. The recommended ratio for all radiologists may well need to be increased in the future.

While ratios for thoracic, cardiovascular, and plastic surgeons are not specified in this study, these specialties are thought to be in adequate supply at the present time.

No numerical criteria are recommended for the sub-specialties of internal medicine because of the absence of adequate baseline information.

NEW LICENSEES

Against a projected shortage of 383 physicians, it should be noted that 95 physicians, of whom 61 had a Rhode Island address, were licensed in 1974 after the inventory used in this study. It cannot yet be accurately determined how many of them are actually in active practice in Rhode Island or in what specialties. The number of newcomers may or may not exceed the number of those who

move away or terminate their practices. They may or may not initiate practice in the field thought to be in short supply. Trends in choice of specialty for new licensees could not be determined accurately for recent years because of the shortcomings of the available licensure data, as indicated earlier in this report. The quality of this information should improve markedly under the system which has been recently implemented, and more reliable conclusions can be expected from the next RIHSEC study. It remains, however, that in Rhode Island, as in the rest of the nation, that there has been a much greater growth of manpower in the specialties than in primary care. The demographic factors which currently govern physicians' loss trends versus gain trends are likely to further enhance the physician maldistribution problem since losses by retirement affect primarily the family physician group whereas gains seem to be primarily among specialists.

CONCLUSION

The study identifies current and impending shortages in the supply and distribution of Rhode Island physicians in primary care and in some specialties. Action should be considered by the appropriate institutions and agencies in the state to overcome or prevent such deficiencies. Particular attention should be paid to raising substantially the number of primary care physicians. To take into account changes in the health care system, and in perceived needs of patients, and to monitor progress in meeting Rhode Island's requirement for physicians, this type of study should be repeated at least every two years.

REFERENCES

- ¹Bureau of Professional Regulation, Rhode Island Department of Health.
- ²American Medical Association: Distribution of Physicians in the U.S., 1973.
- ³Rhode Island Office of Statewide Planning.
- ⁴As reported in The Kaiser-Permanente Medical Care Program—A Symposium, Anne R. Somers, Editor, The Commonwealth Fund, March, 1971; Bennett, R.: Residency Program Size, a paper presented at the annual meeting of the American Medical Association, 1972; Mason, H.R.: Manpower Needs by Specialty, JAMA, Vol. 219, March 20, 1972.
- ⁵Steinle, J.: Suggested Ratio of Physicians to Population, Hospital Topics, Vol. 9, March, 1971.
- ⁶Paxton, H.T.: Doctor Shortage? It's Narrowing Down to Primary Care, Medical Economics, March 19, 1973.
- ⁷Lawton, R.P.: A Report on Physician Distribution in Florida, Journal of the Florida Medical Association, June, 1974.
- ⁸Reports of the Section of Surgery, Brown University, November 16, 1971 et seq.

THE NEW ORAL DIURETICS

The thousands of patients with congestive heart failure and other edematous conditions who are alive and comparatively well attest to the value of the new oral diuretics. The development of a variety of such diuretics is one of the most significant advances in the past several decades in the therapy of congestive heart failure and other edematous conditions. Other disorders in which the development of modern diuretics has proved of particular value of course include cirrhosis with ascites, and edema due to the nephrotic syndrome. Their value in hypertension represents another chapter. A recent Symposium on Edema held at the UCLA School of Medicine titled *The Patient with Edema. New Concepts, Approaches, Problems* was the first major meeting on the subject in more than a decade.

Paul A. Cannon of Columbia University pointed out that investigation into the manner and sites of action of diuretic compounds has yielded fundamental information about the mechanisms responsible for edema formation. The drugs can be grouped into several classes: 1. The long-established diuretics, such as the carbonic anhydrase inhibitors, the organomercurials, and the thiazides; 2. The potassium-sparing diuretics, such as spironolactone and triamterene; and 3. The newer oral drugs, such as furosemide and ethacrynic acid, that exert their major activity on that area of the kidney called the Loop of Henle, where an important part of the kidney action takes place.

By selectively combining agents that may act upon different processes in different areas of the kidney, edematous conditions can often be treated more effectively, and the edema in previously refractory patients mobilized. With attention to the mechanism of action of the various compounds, the electrolyte and acid-base disturbances that may otherwise occur can be anticipated and forestalled. Cannon observed that thiazides tend to depress glomerular filtration rate but do not interfere with urinary concentrating ability. He added: "They act to impede the reabsorption of chloride and sodium in that portion of the Loop of Henle which exists in the renal cortex, and hence tend to reduce the ability of the kidney to dilute the urine. During the action of the thiazide

diuretics, reabsorption of sodium in exchange for potassium continues in the distal nephron. Hence, during the diuresis, potassium excretion may increase, and the patient may develop hypokalemia and run the risk of digitalis toxicity."

He warned, however, that the potassium-sparing diuretics such as spironolactone and triamterene may lead to hyperkalemia, particularly when administered to patients with renal disease or those receiving potassium supplements. Both drugs may also tend to produce a slight metabolic acidosis as a consequence of the reduced excretion of hydrogen ions, and may also impede the capacity of the kidney to dilute the urine.

The "enormous benefits" when edema is relieved in a patient with congestive heart failure were emphasized. In many cases a patient is able to breathe better, he is able to oxygenate his blood more readily, and his heart has less work to do. In a number of patients with the so-called heart failure of acute myocardial infarction, true heart failure is not present at all. In such patients, diuretics or time, rather than digitalis, is the proper treatment.

H. J. C. Swan of UCLA suggested that diuretics should be the basic therapy for uncomplicated congestive heart failure, with digitalis reserved for special situations such as arrhythmias or refractory conditions. Swan stated: "I would believe that if a patient with systemic congestion, or pulmonary congestion for that matter, can be adequately managed with diuretics alone, that might be the way to go. Diuretics are drugs that have a relatively limited toxicity, and they are rather predictable in terms of dosage relation to toxicity. Digitalis, on the other hand, regrettably is a drug in which we are very close to the toxic level at the time we get a true therapeutic effect." He further indicated that with the diuretics currently available he would resort to diuretics first and then add digitalis only if necessary.

Jan Koch-Weser, a pharmacologist at Harvard Medical School, noted that each agent has a characteristic dose response curve. The question of potency of diuretics is often confused since potency can in fact be defined only in terms of dose. Thus, while furosemide can produce a greater

maximum urinary excretion of sodium than a thiazide drug, it is quite possible with a lower dose of furosemide to produce exactly the same sodium excretion that is produced with a maximally effective dose of hydrochlorothiazide or some other thiazide.

Stressing this point, Morton Maxwell of UCLA, emphasized that there was no reason to switch patients from furosemide to a so-called "milder" drug for maintenance therapy. As long as it is possible to go down the dose response curve, such as 40 mg every other day, or 20 mg, within a few weeks of therapy, there really is no reason to switch from one drug to another. He keeps his patients on long-term furosemide without switching to other diuretics at all. It was further pointed out by Donald W. Seldin of the University of Texas Southwestern Medical School that the dose response curve of furosemide makes it easier to control its activity and avoid potassium loss. Seldin noted that longer acting diuretics which act continuously are particularly likely to generate

potassium deficiency, since there is never an opportunity to replenish the potassium deficits under circumstances where distal delivery of sodium is dampened.

Seldin also emphasized that potassium deficiency rarely occurs in patients receiving diuretics if they are eating well. Patients generally become potassium deficient with diuretics, not only because they lose potassium, but because they're poor and hungry and starved, and sometimes nauseated or poisoned. "It's unreasonable," he states, "to give potassium loads unless it can be demonstrated that the patient is vulnerable to potassium deficiency or one suspects a background of starvation or something of the sort that is apt to render the patient potassium deficient if there is only a slight increase in potassium losses."

These are but a few of the many points brought out at this valuable symposium. The development of the modern diuretics has prolonged the life of scores of thousands of victims of the ancient scourge of dropsy and given them untold comfort.



Isaac Ray Symposium HUMAN RIGHTS, THE LAW, AND PSYCHIATRIC TREATMENT

MAY 24-23, 1975

Speakers will include

THE HONORABLE DAVID L. BAZELON
Chief Judge, U. S. District Court of Appeals for the
District of Columbia Circuit
"Is the Adversary Process Essential to Due Process in
Psychiatry?"

ALAN M. DERSHOWITZ, LL.B.
Professor of Law, Harvard Law School
"Dangerousness as a Criterion for Confinement"

BRUCE J. ENNIS, J.D.
Director, Civil Liberties and Mental Illness Project,
New York Civil Liberties Union
"Emerging Legal Rights for the Mentally Handicapped"

A. LOUIS MCGARRY, M.D.
Director of Legal Medicine, Massachusetts Department
of Mental Health
"The Empirical Approach: The Voice of the Supreme
Court"

JACQUES QUEN, M.D.
Clinical Professor, Cornell University Medical Center
"Isaac Ray: Have We Learned His Lessons?"

JONAS R. RAPPEPORT, M.D.
Chief Medical Officer, Supreme Bench of Baltimore
"Enforced Treatment — Is It Treatment?"

ALAN A. STONE, M.D.
Professor of Law and Psychiatry, Harvard University
Faculty of Law and Faculty of Medicine
"The Right to Treatment and the Medical Establishment"

THE HONORABLE JOSEPH R. WEISBERGER
Presiding Justice of the R. I. Superior Court
Panelist and Discussant

Butler Hospital, 333 Grotto Avenue, Providence, Rhode Island
(A Brown University Teaching Hospital)
In affiliation with the R. I. District Branch,
American Psychiatric Association
and the R. I. Bar Association

Registration Fee — \$25.00

Student Scholarships Available

Advance registration required. Send name, address and check to:
Isaac Ray Symposium, Butler Hospital, 333 Grotto Avenue, Providence, Rhode Island 02906.
Deadline May 1, 1974. Make checks payable to Butler Hospital — Isaac Ray Symposium.

TREATMENT OF END STAGE RENAL DISEASE

(Continued from page 155)

disaster that may be the consequence of a diagnosis of chronic uremia, extended Medicare coverage to all persons who are directly or indirectly Social Security beneficiaries. Although this legislation has alleviated markedly the financial problems of the individual patients or of other state and private agencies which previously supported the cost of chronic hemodialysis, the projections indicate that society at large will have to bear a very considerable financial burden.

What can be done to decrease this expenditure while at the same time preserving adequate medical care? In view of our inability to prevent the development of chronic renal failure, three main avenues seem to be open for consideration. The first relates to the number of patients accepted for treatment. In the first several years after the development of chronic hemodialysis, criteria for acceptance were fairly rigid. In 1967 the Report of the Committee on Chronic Kidney Disease⁸ depicted the ideal candidate as "between 15 and 45 years of age, free of irremediable disease such as cancer." He must further "not suffer from severe arteriosclerotic heart disease or severe hypertension, be psychologically motivated, live sufficiently close to a dialysis center if he cannot be put on a home dialysis program, and possess adequate financial resources". Since then it has become clear that frequently it is not possible to predict which patients will do well on dialysis, even among those patients with advanced age or with severe coexisting extrarenal disease, and consequently the criteria have been greatly expanded. Although it is recognized that the acceptance of such patients will decrease the average survival rates and increase the likelihood of poor results and inadequate rehabilitation, it appears ethically unjustifiable to return to stricter criteria.

The second possibility relates to technical or organizational changes in the provision of hemodialysis. It is conceivable that, with the advent of newer dialyzers with greater efficiency, the duration and frequency of dialysis may be substantially decreased and costs may be reduced. An alternative would be the advent of some financial incentive for home dialysis. Since the present cost of home dialysis is approximately \$5,000 per year, even supplementing this with the salary of the dialysis helper would not raise it to the present \$20-25,000 per year cost level for in-center dialysis.

The final avenue rests on increasing the rate of transplantation. It has become clear in recent years that proportionally fewer dialysis patients are candidates for transplantation. This is due to many factors, including the fact that the mean age of patients accepted for dialysis is increasing, and that older people tend to develop more frequent and severe complications when treated with the powerful immunosuppressive drugs employed to prevent or minimize rejection. No major advances have been made in this area in the last several years, and the prospects do not appear too bright.

CONCLUSION

The treatment of renal failure has undergone a dramatic change in recent years, which has been brought about primarily by the advent of chronic hemodialysis and renal transplantation. These methods of treatment have become progressively more available and are being employed with increasing frequency. Chronic hemodialysis especially is likely to be used for an ever-expanding population, since patients even of advanced age or those who suffer from serious concomitant non-renal diseases can be effectively treated.

Chronic hemodialysis however is not a completely satisfactory approach to the treatment of renal failure. The technique suffers from many of the disadvantages of a "halfway technology,"¹¹ being expensive, time-consuming, and from the medical viewpoint only partially effective. Indeed, it should be recognized that the continued growth of hemodialysis services is desirable only because of the lack of more satisfactory means of therapy. In view of these considerations, it is likely that society will have to continue to devote an increasing amount of resources to treat a relatively small number of patients. This trend can be reversed only by the development of new approaches capable of preventing renal disease, or reversing it when it has become established, or of making transplantation more acceptable by developing more effective and less dangerous methods of immunosuppression.

Despite these limitations the results of chronic intermittent hemodialysis appear acceptable even when nonrestrictive criteria are employed in the selection of patients, since many patients with end-stage renal failure are partially or completely rehabilitated and with a yearly mortality of approximately 10 per cent. The impact of hemodialysis upon the prognosis and upon the quality of life of most patients with renal failure need not be

emphasized for those physicians formerly faced with the hopeless task of relieving the prolonged agony of the uremic patient.

REFERENCES

- ¹Scribner BH, Buri R, Caner JEZ, et al.: The treatment of chronic uremia by means of intermittent hemodialysis: A preliminary report. *Trans Amer Soc Artif Intern Organs* 6:114-22, 10-11 Apr 60
- ²Cutler SJ, Ederer F: Maximum utilization of the life table method in analyzing survival. *J Chronic Dis* 8:699-712, Dec 58
- ³Bryan FA: National Dialysis Registry Report, Fifth Annual Contractors' Conference of the Artificial Kidney Program of the National Institute of Arthritis and Metabolic Diseases: Proceedings (DHEW Publication No. NIH 72-248). Washington, D.C., Government Printing Office, 1972. Pp. 204-9
- ⁴Lowrie EG, Lazarus JM, Mocelin AJ, et al.: Survival of patients undergoing chronic hemodialysis and renal transplantation. *N Engl J Med* 288: 863-67, 26 Apr 73
- ⁵Farrow SC, Fisher DJ, Johnson DB: Dialysis and transplantation: The national picture over the next five years. *Brit Med J* 3:686-90, 16 Sep 72
- ⁶Eschbach JW, Barnett BMS, Daly S, et al.: Hemodialysis in the home. A new approach to the treatment of chronic uremia. *Ann Intern Med* 67:1149-62, Dec 67
- ⁷Parsons FM, Brunner FP, Gurland HJ, et al.: Combined report on regular dialysis and transplantation in Europe. I. Dialysis and renal transplantation European Dialysis and Transplant Association. In proceedings. Vol. 8. Edited by JS Cameron. London, Pitman Medical, 1971. Pp. 3-27
- ⁸Gottschalk CW: Committee on Chronic Kidney Disease Report. University of North Carolina, Durham, N.C. Washington, D.C., GPO No. 933-491, 1967
- ⁹Pendreich DM, Howitt LF, MacDougall AI, et al.: Survey of chronic renal failure in Scotland. *Lancet* 1:304-7, 5 Feb 72
- ¹⁰Farrow SC, Fisher DJH, Johnson DB: Statistical approach to planning an integrated haemodialysis transplantation programme. *Brit Med J* 2:671-6, 19 June 71
- ¹¹Thomas L: Notes of a biology-watcher. The technology of medicine. *N Engl J Med* 285:1366-8, 9 Dec 71

ACKNOWLEDGMENTS

The authors wish to express their gratitude to Stanley Daum, M.D. and to Robert Davis, M.D. for providing statistical information on patients treated at the Veterans Administration Hospital and The Miriam Hospital Dialysis Units; to H. Denman Scott, M.D. for his help in evaluating demographic data; and to Mrs. Kathleen Lund for her valuable assistance in collecting patient information and for preparation of the manuscript.

Address correspondence and reprint requests to: Serafino Garella, M.D., Director, Division of Renal Diseases, Rhode Island Hospital, Providence, R. I. 02902.



HEMATURIA

(Continued from page 158)

pation of the urethra and perineum, and palpation of the vas deferens on both sides. After basic laboratory tests evaluation usually proceeds to intravenous pyelography, urethroscopy, and cystoscopy. Urinary Pap smears and cultures may be helpful. In a majority of patients these techniques will produce a firm diagnosis. In about eight per cent of cases, however, the diagnosis remains elusive. A more exhaustive approach to these patients including a battery of laboratory tests, repeated cystoscopy, retrograde pyelograms, nephrotomography, selective renal angiography, and renal biopsy has been described, but may provide little new information and is probably indicated only in those patients in whom bleeding or symptomatology are severe or who warrant a high degree of clinical suspicion.¹⁹ However, patients with unexplained hematuria should be followed carefully and re-studied at interval.

MANAGEMENT

Hematuria usually requires little management beyond the steps necessary for diagnosis. Occasionally heavy upper tract bleeding will cause colic and will require bed rest and hydration. Hematuria

(Concluded on next page)

NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY

215 Waterman Avenue

East Providence, Rhode Island

Tel. 438-0660

following blunt renal trauma necessitates such therapy. Marked vesical hemorrhage may be temporarily managed by evacuation of clots through a relatively large catheter and, if necessary, a three lumen Foley catheter with continuous saline irrigation to prevent further clot formation. Significant exsanguination requiring transfusions is uncommon with hematuria not following trauma. The use of epsilon amino-caproic acid may be hazardous, especially with severe renal bleeding.²⁰ Recently the use of intravesical formalin has been suggested in special situations such as for treatment of hematuria secondary to radiation cystitis.²¹

SUMMARY

Hematuria is a sign of grave disease unless proved otherwise. More than 20 per cent of patients with this sign will have cancer somewhere in the genitourinary tract.⁸ Complete urological evaluation is usually essential.

ACKNOWLEDGMENT

Illustrations by Judith A. Sellins

REFERENCES

- ¹Cook MH, et al.: The detection of blood in urine. *American J Med Tech* 22:218-31, Jul-Aug 56
- ²Greene LF: Significance of Hematuria. *Med Clin No Am Mayo*: 1011-16, Jul 51
- ³Wright WT: Cell counts in urine. *Arch Int Med* 103:76-8, Jan 59
- ⁴Vaughan ED, Wyker AW: Effect of osmolality on the evaluation of hematuria. *J Urol* 105:709-11, May 71
- ⁵Leonards JR: Simple test for hematuria compared with established tests. *JAMA* 179:163-4, 10 Mar 62
- ⁶Levin S: Red urine: the Monday morning disorder of children. *Pediatrics* 36:134-5, July 65
- ⁷Cardwell JB: Red urine associated with methyl dopa treatment. *Lancet* ii:326, 9 Aug 69
- ⁸Lee LW, Davis E: Gross urinary hemorrhage: a symptom, not a disease. *JAMA* 153:782-4, 31 Oct 53
- ⁹Richardson EJ: Hematuria in the aged male. *Geriatrics* 17:384-6, Jun 62
- ¹⁰Gartman E: The significance of hematuria in young men. *J Urol* 75:135-42, Jan 56
- ¹¹Harrison WE, et al.: Non-traumatic hematuria in children. *J Urol* 96:95-100, Jul 66
- ¹²Northway JD: Hematuria in children. *Journal of Pediatrics* 78:381-96, Mar 71
- ¹³Schmidt JD, Flocks RH: Urologic aspects of sickle cell hemoglobin. *J Urol* 106:740-44, Nov 71
- ¹⁴Allen TD: Sickle cell disease and hematuria: a report of 29 cases. *J Urol* 91:177-83, Feb 64
- ¹⁵Antolak SJ, Mellinger GT: Urologic evaluation of hematuria occurring during anticoagulant therapy. *J Urol* 101:111-13, Jan 69
- ¹⁶Rogers PW, et al.: Familial benign essential hematuria. *Arch Intern Med* 131:257-62, Feb 73
- ¹⁷Bruce PT: Stress hematuria. *Brit J Urol* 44:724-5, Dec 72
- ¹⁸Skinner DG, et al.: Diagnosis and management of renal cell carcinoma. *Cancer* 28:1165-77, Nov 70
- ¹⁹Burkholder GU, et al.: Unexplained hematuria. *JAMA* 210:1729-33, 1 Dec 69

²⁰Coggins JT, Allen TD: Insoluble fibrin clots within the urinary tract as a consequence of epsilon aminocaproic acid therapy. *J Urol* 107:647-9, Apr 72

²¹Shah BC, Albert DJ: Intravesical instillation of formalin for the management of intractable hematuria. *J Urol* 110:519-20, Nov 73



PSYCHO-ACTIVE MEDICATION AND LEARNING PROBLEMS IN CHILDREN

(Continued from page 160)

anorexia and sleeplessness, Loss of appetite usually wears off with a continued use of medication, If it does not, it can be counteracted by one of the newer appetite stimulants. Sleeplessness can be obviated usually by therapeutic adjustment. 2) Therapeutic trial or initial dosage determination requires close and frequent monitoring by the physician. Close cooperation on the part of the mother is important. 3) Since the parent must know that the medication is helping the child concentrate, if in fact it does, it is important that, as part of the trial, medication be administered at a time when the child can be observed by the parent, such as during a weekend, because the result if positive as observed by the parent makes continued administration reasonable. 4) Habituation to the psychoactive stimulants has not been demonstrated; in fact a long-term study has shown that patients who were treated with this type of medication seemed less vulnerable to drug abuse in later life.⁵

OBSERVATION OF RESULTS

Some consultants believe that the child's teacher should be intimately involved with assessment as to the response and its continued effect because of the teacher's prolonged contact with and expertise in child observation, and also because of the fact that the effects of the medications are usually not observable away from school. Other consultants are concerned with issues such as bias concerning the medication's affecting validity of observations, "labeling" of children known to be on medication, and news media charges concerning teachers' involvement in deciding that children should be on medication. These consultants argue that it is the child and education interface efficiency that should be the primary concern of the school, not the clinical means which might have brought about improvement. They would try to keep schools as uninvolved as possible in this primarily physician-patient decision. They believe

that it is the parent who should be most intimately involved and who obviously must be thoroughly aware of the benefits of medication if they occur. Utilizing the parents as the primary reporters seems to them to accomplish all of these things. Certainly, in cases where there is a disparity in information the opinion of the teacher would be requested. In any case the parents should, if possible, remain the main source of information to the physician, in order to relieve the school of involvement in medication issues and to encourage the continued involvement of the parents in helping their child.

The purpose of these medications is primarily to help the child concentrate and thus learn better, not to make him more acceptable in the classroom. The medication does not change him into a different personality, but helps him to be as he would like to be, but temporarily is unable to be through no fault of his own.

There is disagreement as to whether a child responding to treatment should continue his medication on weekends and vacations. Since these are usually school-centered problems exclusively, some believe that the medication should be eliminated during such periods because of the possible effects on growth or possible unforeseen side effects. Others are of the opinion that the medication affects overall adaptation and that discontinuity would affect the child's image of himself.

Certainly the medications should be administered at the lowest dose compatible with a satisfactory response, and there should be frequent assessments of need by trial discontinuance.

CONCLUSIONS

Most consultants conclude that psychostimulant medication has a definite place in the management of children with attentional control problems. In any situation involving long-term administration of medications attempts should always be made to remedy the situation by environmental manipulation, i.e., teaching techniques and parental understanding, before psychostimulants are instituted. Frequent reassessment of their continued need should then be made.

School functioning represents a major portion of the child's adaptation during this stage in his life. Failure affects the individual's view of self-worth to a significant degree. Children with learning problems deserve the concern and advocacy of their physicians.

REFERENCES

- ¹Rabe EF: Neurological Evaluation. Minimal brain dysfunction in children. N & SDCP Monograph. Public Health Service Publication No. 2015. U.S. Government Printing Office 1969
- ²Goldfarb W: Childhood Schizophrenia. Harvard U. P., 1961
- ³Ozer N: Diagnosis of the child with learning problems: A child developmental approach. Clinical Procedures, Childrens Hospital Nat. Med Center Vol 28 No. 6 June, 1972 Pp. 141-43
- ⁴Twitchell TE, et al.: Minimal cerebral dysfunction in children: motor deficits. Trans of the AMA 91, 353, 1966
- ⁵Laufer MW: Long term management and some follow up findings on the use of drugs with minimal cerebral syndromes. Journal of Learning Disabilities. 4:9, Nov 1971, Pp. 55-58



3 HOME CARE PHYSICIANS

Full time, private practice in metropolitan Providence private homes, senior citizen homes, nursing homes, other home care facilities. \$50,000 to \$70,000 salary agreements or guarantees. Write:

WILLIAM E. REEVES, M.D.
P. O. Box 2346
Providence, R. I. 02906

PHYSICIAN'S OFFICE FOR RENT

RUMFORD — RESIDENTIAL SECTION

FIRST FLOOR — 5 OR 6 ROOMS

FORMER FAMILY PHYSICIAN'S 19 YEARS

Call Evenings 521-6738

MAKE YOUR VOICE HEARD IN THE REVIEW PROCESS

♦ ♦ ♦

996 PHYSICIANS
HAVE JOINED

♦ ♦ ♦

Support R.I.P.S.R.O.



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU of the Providence Medical Association

Introducing NUVEEN TAX-EXEMPT BOND FUND

Check-a-Month Plan Series 60

The coupon below will bring information on how to obtain income which is entirely exempt from Federal income taxes, in the opinion of counsel. This new series consists of 200,000 units—each of which offers you a share in a \$20,000,000 par value portfolio of professionally selected municipal bonds. The Fund's chief objectives are conservation of capital and tax-free return. Participants receive a monthly check for their proportionate share of the tax-free interest. For a free prospectus, call or write your nearest Nuveen office or:

WAYNE E. CROSS

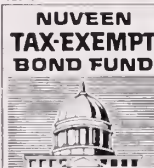
1349 West Shore Road, Warwick, R. I.—738-4574

representing

INVESTORS DIVERSIFIED SERVICES

Please send me information of the Nuveen
Check-a-Month Plan.

Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____



Copies of the Prospectus may be obtained in any State only from a dealer which may offer these Units in such State.

E. P. ANTHONY, INC. *Druggists*

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
HOpkins 7-8050



where does Mrs. Pickney go now?

...s progressing very well. Doesn't need extensive hospital care any longer. And yet she's still not ready to take care of herself at home.

Now, you and your patient have an alternative. Another level in progressive patient care. Skilled Nursing Facilities. Because care in selected SNFs is now covered under all Blue Cross and Blue Shield subscriber contracts for anyone under age 65.

Using an SNF participating in the Blue Cross and Blue Shield program, your patient can receive needed care in a facility meeting or exceeding Federal Medicare requirements. Care for your patient is directed by you through a qualified registered nurse. All medically necessary therapy and medication as well as your visits are covered, as they would be for

hospital services as outlined in the patient's subscriber contract.

For you, this new benefit means the same claims filing procedures and forms now being used with assistance as close as your phone just by calling your professional relations representative.

For your patients, it means health care coverage in a facility designed for their particular recovery needs.

Skilled Nursing Facility. Another link in progressive patient care benefits from Blue Cross and Blue Shield of Rhode Island. SNFs—they're on Mrs. Pickney's way home.



**Blue Cross
Blue Shield**
of Rhode Island

We help you to invest in yourself

When you're busy taking care of other people, it's hard to find time to take care of yourself. That's where we come in.

We're experts in the field of financial planning for physicians. We've done a lot of it for physicians like yourself. In short, we have the experience and know-how to help you achieve your own personal goals ... thru sound, intelligent, professional counseling.

Whether it involves incorporation, estate or financial planning, profit sharing or pension plans, Keogh plans, tax shelter ideas, investments, life insurance or other financial concepts, our staff has the scope and capacity to analyze your personal situation; recommend the right investment programs; and tie it all together for you.

Want more information?

Give us a call, and we'll arrange a personal conference at your convenience.

New England Physicians Advisory Services, Inc.

One Wells Avenue, Newton, Mass. 02159
Tel: (617) 965-5100



Financial planning for physicians.
Retirement Planning (Keogh, Pension, Profit Sharing)
endorsed by the Council of the
New England State Medical Societies.

New England Physicians Advisory Services, Inc.

One Wells Avenue, Newton, Mass. 02159
Tel: (617) 965-5100

I would like to learn more about how I can invest in myself.

Name

Address

City State Zip

Home ☐ Office ☐ Hospital ☐

Date of Birth

Use this telephone number:

RI-75-4

The Doctor As A Revolutionary: The Next Twenty Five Years

Annual Message Of The President Of The Providence Medical Association

By Peter L. Mathieu, Jr., M.D., FAAP

This is a democratic nation. Freedom of choice in every aspect of life is man's inalienable right. My fervent hope is that this country will make its own free creative choice of health care policy in the future. To make a valid decision the average American must be aware of the many faces of our Health Care System. Individuals possessing differing knowledge and differing views constitute the soul of thought. Most Americans are aware of the private doctor as the source of primary care. Let us explore some alternatives.

The discrepancy between planning and results becomes greater as one proceeds from the simple problems in the life of a family to larger groups of people in cities, states, and the country as a whole. Planning for health care is a good example. In planning for health care for larger groups of people there is less agreement as to the approach, and eventually it appears to be necessary to rely on government with its power to use coercion to force the issue.

HMOs

What is an HMO? Between now and July 1, 1978, the United States Government has earmarked \$375,000,000 for Health Maintenance Organization projects and development as an option to the

PETER L. MATHIEU, JR., M.D., *Director, Pediatrics, St. Joseph's Hospital; Medical Director, Catholic Social Services, St. Vincent's Center, St. Aloysius Home, Rhode Island School for the Deaf.*

Read at the 128th annual meeting of the Providence Medical Association, January 17, 1975.

private practice of medicine. There is nothing new in the HMO concept. An HMO provides comprehensive health service for a specific group. In return, the HMO subscriber must pay a fixed periodic sum in advance. The rhetoric of HMO focuses on keeping subscribers healthy as well as curing illnesses after they start. Now that we have practically eliminated such diseases as small-pox, diphtheria, measles, poliomyelitis, dysentery, malaria, and tuberculosis, and made infectious disease control a matter of one simple visit to the doctor's office, some ivory-tower administrators are supporting the concept of HMOs. Why? Because they can control the dollars and cents cost of the medical package fringe benefit for the employee or insured on a cost benefit basis. Should they analyze the problem more realistically, the actuaries would recognize that patient demands and the cost of these demands will continue to escalate as the Government becomes Uncle Sam for National Health Care. Kaiser Foundation officers have announced rate increases of 15.8 per cent for the California group effective January 1, 1975, and the Rhode Island Group Health Association has requested an even larger increase in the capitation rates for their plan. Rising operational costs are given as the reason for the rate increases.

Physicians in the Providence County area of Rhode Island through their medical association have endorsed the principle of offering capitation to their patients. On the basis of the projected start-up costs the sum of \$5,000,000 has been suggested as the minimum reserve needed to make

(Continued on next page)

such a plan operational. The insurance industry has the capital to move into this area of health financing. This industry has at the same time been moving out of the malpractice health insurance business. The insurance industry is opposed to no-fault auto insurance and is vacillating in the fire, theft, and casualty insurance businesses. Why does the insurance industry wish to abandon malpractice insurance and enter into the HMO insurance business?

Surely no big money can be made with the doctor's \$10 office visit. With the advent of National Health Insurance will the \$10 and \$20 office visits go the way of the five cent cigar? The Providence Medical Association is prepared to offer its own program of an HMO without walls, provided by the physicians in the state at a cost consistent with sound cost-benefit analysis and good patient care. An HMO without walls continues the policy of the free choice of physician by the patient. This contrasts with the policy of HMOs presently operating in Rhode Island, which limit the choice of physician to those employed by the HMO.

Progress for Providence and the Providence Health Centers were considered model antipoverty programs when they were formed in the "Great Society" days of the 1960s. They aimed at wide participation of the poor they were intended to serve. Today they are no longer models of success. There are 10 Providence Health Centers (termed HMOs). Other HMOs in Rhode Island operate in Bristol and North Providence, and Blue Cross has plans for developing seven to nine more HMOs throughout the state. There are 947,000 people living in Rhode Island. The Rhode Island Group Health Association, a North Providence based HMO with about 13,000 members after five years of operation, states that it needs approximately 20,000 members to break even.

NEEDS OF THE POOR

If Rhode Island Group Health Association needs 20,000 subscribers to be economically solvent and if the Health Centers promise the same quality and quantity of health care, should not each of the Health Centers need the same number of subscribers to break even? If this premise is valid, there is not a sufficient number of people in Providence (population 170,000) to supply the 200,000 subscribers needed to reach the break-even figure.

As a physician long active in community af-

fairs and still greatly interested in the welfare of our population, I propose that the state and federal agencies take a long hard look at these Health Centers and their cost-benefit status. The administrative offices of the Providence Health Centers (for the poor) have been moved to the more affluent East Side Wayland Square area. The Health Centers have recently formulated plans to provide health services on a capitation basis to the general population. Are the poor to be denied again?

Poverty engenders poor health. National priorities do not seem to be much directed to the poor and non-white. I recommend creating public service jobs with a minimum of strings attached. I recommend wherever possible education to the level attainable without penalizing qualifications. They need our compassion and help and a chance to earn the food they eat by working quietly.

The physician must be knowledgeable concerning costs in the delivery of his primary care services. The physician is given credit for providing benefits to his patients. He incurs costs when these services are provided. As costs in general have risen, the physician's costs have escalated. A physician's medical fees should be based on time and effort and not on some supposed relative value basis or other vague determination.

One role of the physician is to give professional advice to a troubled family. The doctor must worry about his patient. Does he worry just for the short time he spends professionally with the family? The doctor's costs constantly increase in relation to the benefits he delivers. His hours are irregular, and he spreads himself too thin. Professional administrators who are not really cognizant of the practical problems of medical practice step into the gap. They are not suited to provide some of the services needed by the patient. The service is usually much more costly to the patient than if it were provided by the physician himself.

FEEES AND MEDICAL COSTS

The fees for medical services have increased just as have the fees for non-medical services. A selective analysis of fees was made by a group of French doctors in Paris who found the comparisons odious.

A record total of \$480,000,000 was spent for health care in Rhode Island in 1973. This was well above the national per capita average. The Rhode Island per person expenditure for the services of doctors was the only one markedly

below the national average, \$71.06 for this state as compared to \$81.59 for the nation. By far the largest proportion of health care expenditures went for hospitalization. This came to 42.5 per cent of the total, or \$204,100,000. Payments to physicians and osteopaths amounted to 5 per cent (\$72,000,000). Drugs account for nine per cent (\$54,000,000), nursing home care for six per cent (-3,700,000), and dental services for seven per cent (\$33,600,000).

Hospital costs in Rhode Island have more than tripled in the last 10 years, soaring at a rate of more than four times that of the overall cost of living. The magnitude of these hospital increases actually is poorly understood and has little immediate impact on the great majority of Rhode Islanders. The reason is that about 85 per cent of the state's eligible population (excluding welfare recipients) are covered by Blue Cross and have to meet only a small part, if any, of the bill when they are hospitalized. The largest public source of funds was the federal government with outlays of \$104,000,000. State and local expenditure for Medicaid amounted to \$50,300,000.

About 80 per cent of the Blue Cross subscribers in Rhode Island are enrolled in groups through their places of employment. About 90 per cent of these group subscribers have their premiums paid wholly or in part by their employers.

Many persons confuse Medicaid with Medicare. In Rhode Island the Medicaid program is run by Doctor P. Joseph Pesare with the cooperation and participation of over 90 per cent of the physicians practicing medicine. Medicaid in Rhode Island is recognized as being one of the best Medicaid programs in the country. Medicaid serves the poor. The physicians in Rhode Island have since its inception provided continued service for this program at a less than usual charge. From the beginning there has been a large physician contribution to the favorable cost-benefit ratio in this program, and it continues. I propose that the state give serious consideration to extending and strengthening the present Medicaid program in Rhode Island. I further propose that the state offer greater incentives for physicians to insure their continued participation in this program. I propose that the state restudy its whole social structure for the poor.

In discussing Health Care I further propose that we concern ourselves with measuring both the benefit and cost side of the ratio. We should

attempt to make the result understandable to all. We might, for example, measure and express costs and benefits in a common unit, such as dollars, so as to determine whether the benefits of a particular approach or treatment modality are likely to exceed the cost, or which of several alternative systems is likely to yield the best cost-benefit ratio. Cost effectiveness studies are sometimes directed at identifying the less costly of two or more ways of achieving the same objective — health care for all — while they leave unanswered the question of whether the benefits exceed the cost. Some planners conclude using a purely economic approach that some sacrifices in benefits are necessary to get health care for all.

Far too often recommendations are based on assertions that A is cheaper than B without adequate consideration of the relative benefits, or that A is more effective than B without adequate consideration of the relative costs. Planners have a tendency to indulge in the former fantasy, while physicians are prone to accept the latter. Both sides of the equation must be taken into account. When planners place a money value on human life or on pain, they are not discarding human values. When physicians opt to continue the prevalent fee-for-service system of providing health care through the private patient-physician relationship, they are not discarding human values.

NEED FOR MORE INFORMATION

I propose that the health care system, made up of administrators and physicians, take a long hard look at the health accounting system. I propose that government, industry, doctors, administrators, planners, and consumers use better information, so that they can make better informed judgments. It is foolish to spend huge sums of money on a new health care system. Enforced shorter hospital stays, cook book therapy, control of drug usage, administrative types performing medical duties, and doctors delaying surgery all in the name of cost effectiveness should be avoided. It is still feasible and not too late to work toward improving the efficiency of the present health care system.

Can the private physician who charges up to \$10 for his services survive in his primary care function over the long term, while secondary and tertiary level institutions are charging the same patient for the identical service from \$22 (in Providence Health Centers) to \$40 (in one hospital

(Continued on next page)

out-patient department). I propose that hospitals continue to render secondary and tertiary patient care for, which they were established. I propose that hospitals reduce primary care facilities to a minimum and encourage patients to obtain such care in the doctor's office, where it is best rendered. Their competition with the doctor for the primary care patient, treated more adequately and economically in the doctor's office, would cease. I further propose that hospitals should improve the quality of their services. They should submit itemized bills specifying the services rendered at a charge level consistent with that of other providers (physicians in their offices). This would be fair to the patient, to the provider of the service, and to the employer or third party payor who may be a partner in reimbursement.

In 1974 Rhode Island adopted a state-sponsored Catastrophic Health Insurance Plan. Physicians supported the concept of catastrophic health insurance coverage and worked for the passage of this bill. To be truly effective catastrophic health insurance must tie into a fixed base of coverage with a dollar amount specified. We as physicians support catastrophic health insurance on a national as well as on a state level.

ROLE OF THE STATE

The employer who is footing the bill for many of these health programs is now becoming increasingly aware of the necessity to develop more rational ways of deciding what and how much the government should do in the health care system. I propose that the state government join with the Rhode Island Public Expenditures Council and the Rhode Island Medical Society in asking some important questions. Why is it that a multitude of health programs created with good intentions overlap and compete with each other for years never ending? Why are more and more taxpayers' dollars spent every year in an ever-increasing spiral of administrative largess, while at the same time fewer and fewer of the dollars authorized are returned to the consuming taxpayers in the form of personal health services.

The annual cost of prescriptions per family has risen considerably. This cost escalation is comparable to the price of a complete, self-contained mini-computer system. I propose that, as computers become cheaper and more readily available, the practicing physician have access to them in his daily practice. There is a place for these exotic calculating machines, and the patient stands to

benefit from their use. I propose that the government help the private practicing physician in refreshing his memory for therapeutic agents by providing him with such a computer to relay to him the latest drug information. Other benefits could accrue from the use of a computer, such as in reporting the incidence of adverse drug reactions and the overall effectiveness of one drug as compared to another. The hysteria over generic and brand name drugs might then evaporate as the cost-benefit of such an arrangement became obvious.

In his daily practice the doctor skillfully extracts from the patient those items which are of medical importance. He translates this history, often subconsciously, into planning and practice. Computer technologists who underrate the doctor-patient relationship are overlooking the dangers of a mechanistic approach. The doctor writes: "Out of sight, out of mind." The computer print-out reads, "Invisible, therefore insane." No amount of medical linguistics or other theologisms can displace the physician from his privileged position as one to whom his fellows turn when ill, and from whom they expect both medicine and advice.

The family physician is the best preventative medicine a patient can have. The family doctor must watch out for family crises and step in before trouble starts. Over the last 25 years there has been a plethora of family problems. Yesterday we spoke to each other, today at each other, and in the future about each other. The family doctor and the clergyman both can help by working together in giving to the changing family system a reinforcement of man's basic need to feel good.

PEER REVIEW

Peer Review is the latest fad in the health care regulatory system. In the field of PSRO (Professional Standards Review Organization), PAS-MAP (Professional Activity Study-Medical Audit Program), QAP (Quality Assurance Program, and PEP (Performance Evaluation Program), and other hospital audit programs the emphasis is on a statistical approach. The length of stay in the hospital, and other such norms are measured and compared.

The emphasis is on the physician and his accountability. Equally important and ultimately more beneficial, emphasis must be placed on the administrative structure of the institution and its effectiveness in bringing about a balance for the patient as between cost and benefits. Good ad-

ministration does not manifest itself in the form of multiple levels of administrative authority, but rather in maximizing the numbers of persons directly involved in care.

PUBLIC RELATIONS

Public relations is all the things that a medical association is doing in the community. Publicity without sound public relations is not worth very much. Relations between the Rhode Island press and the Providence Medical Association must be a cooperative one. People want to know how medicine affects people. These stories should be brought to the attention of the public. The Association might in its wisdom invite the press to some of its meetings, and the media might reciprocate by inviting the Association's officers to some meetings, especially when copy concerning medicine is under consideration. This approach of good relations and good news balances out the bad news and builds professional understanding. After 25 years of community involvement, I have come to respect the Rhode Island press and the media.

Medical Association relations with legislators should be straightforward. Membership in the Chamber of Commerce, the press club, and civic organizations, and participation in radio and TV programs require sacrifice but build friends. The Providence Medical Association took the step this year of preparing a booklet for all new members advising them of the many organizations in the county oriented to health and giving them pointers on entering the health care system locally. A positive community attitude will help physicians maintain their personal and professional image and improve their public image.

Physicians rate very highly with individual patients and with individual families. Should not the physician then be delegated to the role of the planner for man's ideal of justice? How can the physician help a man with psychosomatic complaints who has been told he has a freedom of choice — a choice to be laid off from his job or to go from one bad job to another. Those who are ever ready to ride roughshod over the rights of people in the name of self-advancement mold public opinion with rhetoric. Politics makes free use of the patient as a pawn in a war of power and for big stakes in the largest industry in the United States — namely, the health care industry.

THE FUTURE

Government wisely used may indeed help solve some of the most difficult problems in the health care industry. But an overly precipitous attempt to enact National Health Insurance may produce poor results. I predict that National Health Insurance, which may well become law, will result in the government, despite its wisdom, gradually losing its ability to fulfill its pledges. There could indeed be an increasing struggle between competing interests. Non-medical professionals in industry, non-medical professionals in management, non-medical professionals in insurance, non-medical professionals in control systems yet to be born will, in the new system mandated to provide improved health care for all, eat up the doctor, a medically trained medical care specialist.

I predict costs will skyrocket beyond present day imagining. Benefits to the consumer will gradually diminish after first seeming to improve. Employers will pay more for health care fringe benefits than for Social Security and other taxes yet to be conceived. The employee, the consumer, and the patient will experience increased delays in the delivery of medical services and perhaps even poor service. The government in the 21st century, after adding to and patching the health care delivery system, will be forced to curtail the profits of the insurance industry and even cut back on some medical services as being not truly necessary. In the end, there will be a beginning and the physician — in the '80s and '90s clobbered, monitored, computerized, and discarded to the rear of the health care system — will be rediscovered, not by government, but by the people whose ancestors in the '70s merely wanted an appointment in the doctor's office.

All of this can happen. Doctors can keep it from happening by perceiving the beauty of their profession, and what the costs will be to them and their patients. Physicians must band together and let the community hear that physicians do take care of the health needs of the community to the best of their ability, that physicians are available for medical care, and that physicians do worry about their patients and the quality of their service. This effort must be constant, for physicians and patients are equally desirous of a successful health care system.



Will You Support The Rhode Island Professional Standards Review Organization, Inc.?

OVER 900 PHYSICIANS HAVE JOINED!!

The officers and the Board of Directors of R.I.P.S.R.O., Inc. have applied to the Secretary of Health, Education and Welfare for designation as the PSRO for the Rhode Island area and have received a planning grant to qualify as a conditionally designated PSRO. Under the law, a "substantial portion" of all physicians in the area must be members of R.I.P.S.R.O.

It is our hope that you will agree with the approach of the officers and directors of R.I.P.S.R.O., a peer review organization controlled and directed by a committee of licensed physicians. Even though you may not agree with the basic concept of PSRO itself, we hope that you will give your support by requesting membership in R.I.P.S.R.O. There are no dues, fees or other monetary obligations involved.

Dr. Alton M. Paull
President — R.I.P.S.R.O., Inc.

Dr. Alton M. Paull, President
R.I.P.S.R.O., Inc.
106 Francis Street
Providence, Rhode Island 02903

Dear Doctor Paull:

I agree with the general approach of the officers and Board of Directors of R.I.P.S.R.O., Inc., a physician controlled and directed organization, and wish to support that organization as long as it shall be controlled by the physicians of Rhode Island.

I hereby accept membership in R.I.P.S.R.O., Inc.

.....
Signature	Address
.....
Name Printed	Date

PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in

INDEX MEDICUS giving author (co-authors up to three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.

The Bactrim^{T.M.} edge

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

A high assurance of clinical efficacy

- in cystitis, pyelonephritis and pyelitis diagnosed as chronic
- against susceptible strains of the common urinary tract pathogens, usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

Note: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in chronic and recurrent urinary tract infections.

Contraindications: Hypersensitivity to trimethoprim sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus,

exfoliative dermatitis, anaphylactoid reactions, peri-orbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12.

Usual adult dosage: Two tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose[®] packages of 1000; Prescription Paks of 40, available singly and in trays of 10.



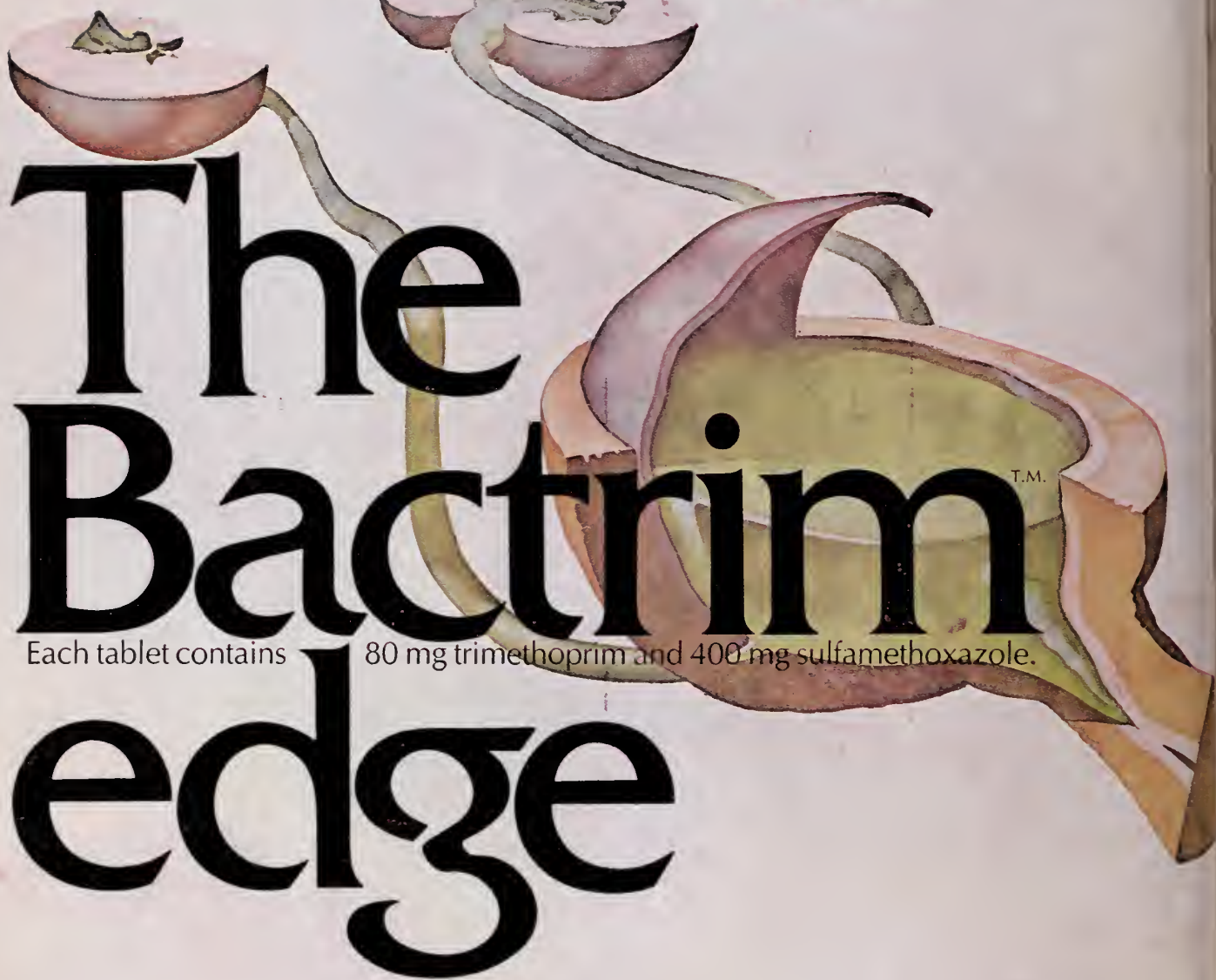
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Bactrim^{T.M.}

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

LIBRARY

APR 23 1976

THE ACADEMY
OF MEDICINE

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

A high assurance of antibacterial activity
in cystitis, pyelonephritis and pyelitis diagnosed
as chronic and due to susceptible organisms.

Before prescribing, please consult complete product information,
a summary of which appears on preceding page.

May 1975
Vol. 58, No. 5

BALCONY

"Let me ever behold in the afflicted and suffering, only the human being"

Both after



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). In addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. It is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) provide relief for both—as excessive anxiety is reduced, the depressive symptoms associated with it are also relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

caution because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider fully pharmacology of agents employed; drugs such as phenothiazines, sedatives, barbiturates, MAO inhibitors or other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

MAY, 1975

Volume 58, No. 5

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.

—o—

*John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
*Stanley M. Aronson, M.D.	*Charles A. Hall, Jr., M.D.
*Bertram H. Buxton, Jr., M.D.	Robert V. Lewis, M.D.
Robert P. Davis, M.D.	*Peter L. Mathieu, M.D.
*John A. Dillon, M.D.	*Jay M. Orson, M.D.
*Herbert Fanger, M.D.	Henry T. Randall, M.D.
	*Guy A. Settipane

(*Also Member Publications Committee)

TABLE OF CONTENTS

CHONG M. KONG: RECOLLECTIONS	
Robert E. Parks, Jr., M.D., Ph.D., Professor of Medical Sciences	186
TRADITIONS	
Horace Martin, Class of '75	201
THE FLEXIBLE CURRICULUM AT WORK	
Anthony Caldamone, Class of '75	205
THE CLASS OF 1975: A DIFFERENTIAL DIAGNOSIS	
Peter LeWitt, Class of '75	207
FAMILY PRACTICE	
Louis Hogrefe, Class of '75	215
FAMILY PRACTICE	
Joseph DiLorenzo, Class of '75	217
WOMEN IN MEDICINE: THE NATURAL THING	
Jane Herrod Joiner, Class of '75	219
ON THE FUTURE OF MEDICAL EDUCATION	
Mark Scott Blumenkranz, Class of '75	226
CASE RECORDS OF THE BROWN UNIVERSITY MEDICAL SCHOOL	
Arthur Horwich and Pardon Kenney, Class of '75	229
EDITORIAL	210
STUDENT BIOGRAPHIES	210
INTRODUCTION	183
LETTER FROM THE DEAN	184
BOOKS RECEIVED FOR REVIEW	188

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription: \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph: AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

MEDICAL EVENTS CALENDAR

Thursday, June 12, 1975

**STRESS INDUCED DISORDERS —
A MAJOR MENTAL HEALTH PROBLEM**

Sanford I. Cohen, M.D.

Superintendent of Dr. S. C. Fuller Mental Health
Center, Professor and Chairman, Department of
Psychiatry, Boston University Medical School

Butler Hospital
Ruggles Room
4:30-6:00 p.m.

Friday, June 13, 1975

HEPATITIS IN CHILDHOOD AND ADOLESCENCE

Richard J. Grand, M.D.

Assistant Professor of Pediatrics, Harvard Medical
School

Roger Wms. Gen. Hospital
Kay Auditorium
10:30 a.m.-12:00 noon

Thursday, June 19, 1975

TARDIVE DYSKINESIA: CURRENT VIEWS

Daniel Casey, M.D.

Resident in Psychiatry, Brown University

Butler Hospital
Ruggles Room
4:30-6:00 p.m.

Thursday, June 26, 1975

SOME ASPECTS OF CHILDHOOD PSYCHOSIS

Donald Gair, M.D.

Associate Professor of Psychiatry, Tufts University
Medical School

Butler Hospital
Ruggles Room
4:30-6:00 p.m.

RHODE ISLAND HOSPITAL

announces the appointment of

W. DEAN WARREN, M.D.

**WHITEHEAD PROFESSOR & CHAIRMAN OF THE DEPARTMENT OF SURGERY
EMORY UNIVERSITY SCHOOL OF MEDICINE, ATLANTA, GEORGIA**

as

**THE FIFTH J. MURRAY BEARDSLEY, SURGEON-IN-CHIEF PRO TEMPORE
DEPARTMENT OF SURGERY**

MAY 29, 30, 31, 1975

GEORGE AUDITORIUM

P R O G R A M

THURSDAY, MAY 29, 1975

10:00 a.m. Rounds with Surgical Residents

12:00 noon Lecture "Current Appraisal of the Treatment of Portal Hypertension"

2:00 p.m. Informal Discussion with House Staff

FRIDAY, MAY 30, 1975

12:00 noon Surgical Grand Rounds

2:00 p.m. Informal Discussion with House Staff

SATURDAY, MAY 31, 1975

10:00 a.m. Combined Medical-Surgical Conference

"Studies on the Treatment of Obesity and Malnutrition"

The afternoon informal discussions are restricted to the House Staff.

Interns and Residents of other Hospitals are cordially invited.

Sponsored by

RHODE ISLAND HOSPITAL DEPARTMENT OF SURGERY

HENRY T. RANDALL, M.D., SURGEON-IN-CHIEF



Introduction

Early in June, Brown University will confer the degree of Doctor of Medicine for the first time since 1827.

In honor of Brown's maturation as a medical school, the RHODE ISLAND MEDICAL JOURNAL is devoting the contents of this issue to the graduating medical students, their endeavors and recollections, their achievements and aspirations. It is dedicated by the class to the memory of a former classmate, Chong M. Kong, who died in an accident last summer.

We feel that this issue is unique. The contents have been composed and designed entirely by the students themselves, and include articles on a number of current issues in medicine, biographical material and postgraduate training plans of the

seniors, and candid photographs of students and faculty members.

The issue was conceived, compiled, edited, and designed by Anthony Caldamone '75, Arthur Horwich '75, Peter LeWitt '75, and Jeanne Elaine Maguire, Coordinator for Medical Alumni Affairs.

Photographs by Carl Boudreau, Christy Bowman, Uosis Juodvalkis, Peter LeWitt '75, Glenn Mitchell '75, and Hugh Smyser.

Cartoons by Willette Senter.

The articles herein were written primarily by individuals in the senior class of the Brown University Program in Medicine. The opinions expressed are not necessarily those of the editors, the administration of the medical program, or the RHODE ISLAND MEDICAL JOURNAL.

. . . Guest Editors



Letter From The Dean



To the Class of 1975:

We have shared in the birth of a new medical school founded in the belief that competency in the fundamental sciences, humane behavior, and skill in the arts of health care delivery are not antagonistic goals; and as a class you are indeed unique in both aiding the gestation of our medical program as well as being its first conception.

In the years ahead I hope that each of you will achieve a personal covenant with medicine, practicing your profession in a climate of commitment and responsibility, giving to your patients your most authentic abilities. The beauty of our profession is not so much that it classifies and

records, or even predicts, but that it cherishes this commitment while encouraging insight and heightened sensitivity in both its practitioners and patients.

Buber tells the story of Susya who lamented shortly before his death, saying, "When I get to heaven they will not ask me, 'Why were you not Moses?'" but they will ask, 'Why were you not Susya? Why did you not become that which only you could become?'" I pray that each of you will reach your genuine destiny. Be well and go well.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs



Oath of the Physician

Now being admitted to the high calling of the physician, I solemnly pledge to consecrate my life to the care of the sick, the promotion of health and the service of humanity.

In the spirit of those who have inspired and taught me, I will seek constantly to grow in knowledge, understanding and skill and will work with my colleagues to promote all that is worthy in the ancient and honorable profession of medicine.

The health and dignity of my patient will ever be my first concern. I will hold in confidence all that my patient relates to me. I will not permit considerations of race, religion, nationality, or social standing to come between me and my duty to anyone in need of my services.

This pledge I make freely and upon my honor.

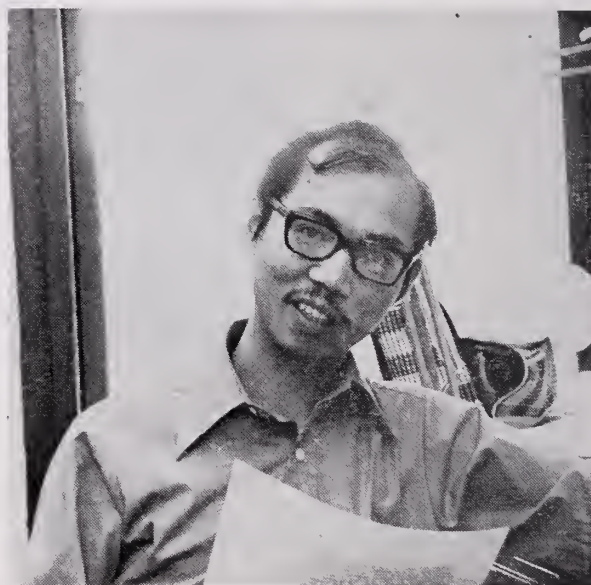
This oath was composed by a committee of faculty and students of the Program in Medicine, chaired by Doctor George E. Erikson, and will be used for the first time on June 2, 1975, when Brown confers the M.D. degree upon members of its charter class of medical students.

Chong M. Kong: Recollections

By Robert E. Parks, Jr., M.D., Ph.D., Professor
of Medical Sciences

To many of us who knew him well Chong M. Kong epitomized the Scholar-Scientist-Physician that we hoped to develop when Brown's Medical Program first began about a dozen years ago. Chong would have been awarded both the M.D. and Ph.D. degrees at graduation in the Spring of 1975. Actually, he could have received his Ph.D. degree several years ago since he had completed all of the academic requirements and had performed sufficient original research for the presentation of a more-than-adequate Ph.D. thesis. However, Chong decided to enroll in the Medical Program at advanced standing and to devote his free time to refining and extending his laboratory findings. Rather than write the Ph.D. thesis immediately, he decided first to prepare two exceptionally fine research manuscripts. Ironically, the first of these appeared in the July, 1974 issue of *MOLECULAR PHARMACOLOGY* which was actually in the mails at the time of his death. The second manuscript had been sent to *BIOCHEMICAL PHARMACOLOGY* a few weeks earlier and was accepted for publication after only a few minor revisions. These manuscripts, as well as other data, will be submitted to the Graduate School at Brown University for consideration for the awarding of a posthumous Ph.D. degree. I regard these two publications as among the most significant to have originated from my laboratory group.

Chong came to Brown by an unusually circuitous route. He was born in mainland China prior to the Communist revolution, which forced his father to flee to Hong Kong. When he was a very small boy, Chong himself escaped to Hong Kong in the middle of the night clinging to the back of a swimmer hired by his father. Chong had described this episode to me several times, and since the tragic sailing accident of last July, I have often wondered whether memories of that frightening incident from his childhood played a role in his death. After completing his early schooling in Hong Kong,



Chong M. Kong

Chong decided to study Pharmacy in the United States. Since he had relatives in New England, he came to visit schools in the Northeast. I recall his telling me that on first sight he fell in love with South County and the beautiful campus of our State University and enrolled immediately. He was a brilliant student and during his studies in the School of Pharmacy first became interested in the field of Pharmacology. On the basis of unusually strong recommendations from our friends and colleagues, Dean Heber Youngken and Professor Joseph Turcotte, as well as his academic record, he was admitted to the Graduate School of Brown University and chose to study Biochemical Pharmacology under my direction.

It has been my privilege over the past 20 years to have guided the development of many excellent graduate students and postdoctoral fellows, most of whom are now highly productive scientists and several of whom have achieved international recognition and hold positions of major responsibility

in the academic and scientific community. I am convinced that, had he been permitted the opportunity, Chong would quickly have ranked among the most accomplished of these former students, all of whom I am very proud. Chong had a combination of talents that were in many ways unique. In the few years spent in my laboratory in graduate study he had developed from an insecure novice into a mature professional scientist in full command of the scientific literature of his field and with a complete mastery of the laboratory bench. In addition, several of my clinical colleagues have told me that they considered him among the most promising of the young clinicians in Brown's Medical Program.

An illustration of the degree to which he had developed as a scientist and beginning clinician may be seen in his review article on Cystinosis published in the January, 1975 issue of this JOURNAL. This review was actually a paper that Chong had prepared for Doctor Serafino Garella in an elective course in Nephrology. We found it lying on his desk the morning after his death and forwarded it to Doctor Garella. The fact that his "classroom exercise" was considered publishable with very little change demonstrates the remarkably high standards that characterized all of Chong's endeavors.

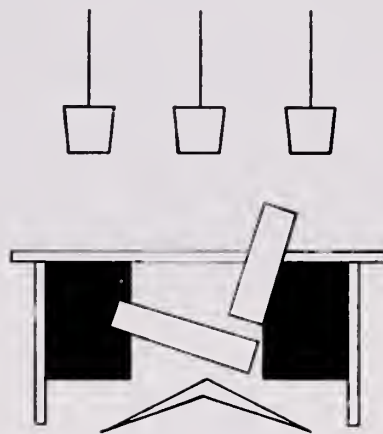
As a result of numerous discussions and long consideration, Chong had decided to take further clinical training, first in Medicine and then in Cancer Chemotherapy. There is a desperate need in our Profession for people with this type of training and ability; and there is no question in my mind that, with his combination of talents, his charming personality, absolute integrity, and total commitment, Chong would have made major contributions to this crucial field. Thus, his death is much more than a deep personal loss to those of us who loved him as a dear friend or, in my case, as a younger brother — the loss to our Profession is incalculable.

There seems little point in dwelling further on the details of the tragic and, in many ways inexplicable, event of last summer. However, I would be remiss if I did not take this opportunity to express our gratitude to two very brave young men, Steven Senft and William O'Connor, who at considerable personal jeopardy did all that was humanly possible to save Chong's life.

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

FOR SALE

(Physician Retired)

One (1) examining table with side table and stool to match (tan color with black trim)

Two Welch-Allen combination Oto and Ophthalmoscope

One Sphygmo-Oscillometer (Co'lens)

One Birtcher Co Megason Ultra Sound Therapy Unit Model 105 F

Four Cystoscopes:

One Brown-Buerger No. 24 F

One Brown-Buerger No. 16 F

One Pan endoscope No. 20 F Fore Obliq

One complete National No. 24 F

EDMUND A. SAYER, M.D.

P.O. Box 312, Wakefield, R.I.

02880

Books Received For Review

The Editor acknowledges the receipt of the following books and thanks the publishers for sending them. We shall have as many as possible reviewed. The volumes are greatly appreciated and will be added to the Library's collection where they will be available to readers.

THE RIGHTS OF HOSPITAL PATIENTS. The basic ACLU Guide to a Hospital Patient's Rights by George J. Annas. New York, Discus Books/Published by Avon, 1975. \$1.50 plus 25¢ per copy for mailing.

CREATIVE AGGRESSION by George R. Bach
and Herb Goldberg. New York, Doubleday &
Company, Inc., 1974. \$8.95

THE STORY OF MEDICINE by Petros De Baz.
New York, Philosophical Library, 1075. \$6.00

HANDBOOK OF OBSTETRICS AND GYNECOLOGY by Ralph C. Benson. Fifth Edition. Los Altos, Lange Medical Publications, 1974. \$8.00

MEDICARE and SOCIAL SECURITY. What You've Got Coming by Bruce Biossat. Fourth Edition. New York, Doubleday & Company, Inc. (Dolphin Paperback), 1973. \$1.95

I THINK I CAN by William Breisky. New York, Doubleday & Company, Inc., 1974. \$6.95

PSYCHIATRY IN PRIMARY CARE by Remi J. Cadoret and Lucy J. King. Saint Louis, The C. V. Mosby Company, 1974. \$12.95

HANDBOOK OF MEDICAL TREATMENT by
Milton J. Chatton. Fourteenth Edition. Los Altos.
Lange Medical Publications, 1974. \$7.50

CORRELATIVE NEUROANATOMY AND
FUNCTIONAL NEUROLOGY by Joseph G.
Chusid. Fifteenth Edition. Los Altos, Lange
Medical Publications, 1973. \$8.50

Ciba Foundation Symposium 25 (n.s.) PARASITES IN THE IMMUNIZED HOST: MECHANISMS OF SURVIVAL. Amsterdam, Associated Scientific Publishers, 1974

Ciba Foundation Symposium 26 (n.s.) THE POISONED PATIENT: The Role of the Labora-

(Continued on page 195)

POOLS BY AQUA FUN

BUILDERS IN THE ART OF CUSTOM POOLS

Specializing In

ONE PIECE FIBERGLASS POOLS — NO SEAMS

WITH SELF CLEANING POOL SYSTEMS

FREE FORMS —

DESIGN YOUR OWN POOL

VISIT OUR INDOOR DISPLAY POOL

384 Atwood Ave., Rt. 5

Cranston, R.I.

Tel.: 944-2010

HEALTH HAVENS

**A SKILLED NURSING HOME
MEDICARE PARTICIPATING**



Registered Professional Nurses On All Shifts

Dietician Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

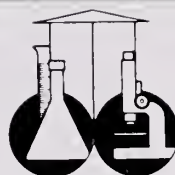
JCAH Accredited

**We deal
exclusively
in the investment
opportunities
of tax free
state and
municipal
bonds.**



CAROLAN & CO. INC.
2401 HOSPITAL TRUST TOWER
PROVIDENCE, R.I. 02903 (401) 331-1932

**Half a
Century of
Service to
the Medical
Profession**



eastern scientific company

267 PLAIN STREET
PROVIDENCE, RHODE ISLAND 02905

Do You Prescribe Modified Diets?



Patients often need help adapting a diet to their personal needs and preferences. At the Diet Counseling Service a registered dietitian will make your prescribed diets more individualized — more effective.

A Physician's Referral is necessary. For more information call Diet Counseling Service 728-9660.

**ONE CALL!
Your complete
source of all
medical, surgical,
laboratory
needs**

**YOU'RE INVITED TO VISIT OUR
NEWLY EXPANDED MEDICAL &
SURGICAL SUPPLY DEPARTMENT**

**WOULD YOU LIKE OUR NEW
MEDICAL SUPPLY CATALOG?**

Call 421-4600



R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.

**TASCA
ABC
PLAN**



200 FALL RIVER AVENUE, SEEKONK
336-7200



DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Trademark

makes sense in edema.*

either inconvenient, unpalatable, expensive potassium supplements nor special K⁺ rich diets are needed as a rule. Just 'Dyazide' once or twice daily for control of edema.

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; sodium-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Concomitant use in progressive renal or hepatic dysfunction developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Potassium-sparing diuretic-coated potassium salts may cause small vessel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly patients, diabetics). If hyperkalemia develops, substitute a

thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in

cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'Dyazide' gets excess water and salt out and helps keep essential potassium in.





**Adequate
fluid
intake**



**Frequent
voiding**

The Brd Basic DO

Gantanol[®] (sulfamethoxazole) B.I.D.

ur tablets (0.5 Gm each) STAT-
n 2 tablets B.I.D. for 10-14 days

asic therapy with
onvenience for
cute nonobstructed
ystitis

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic non-obstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

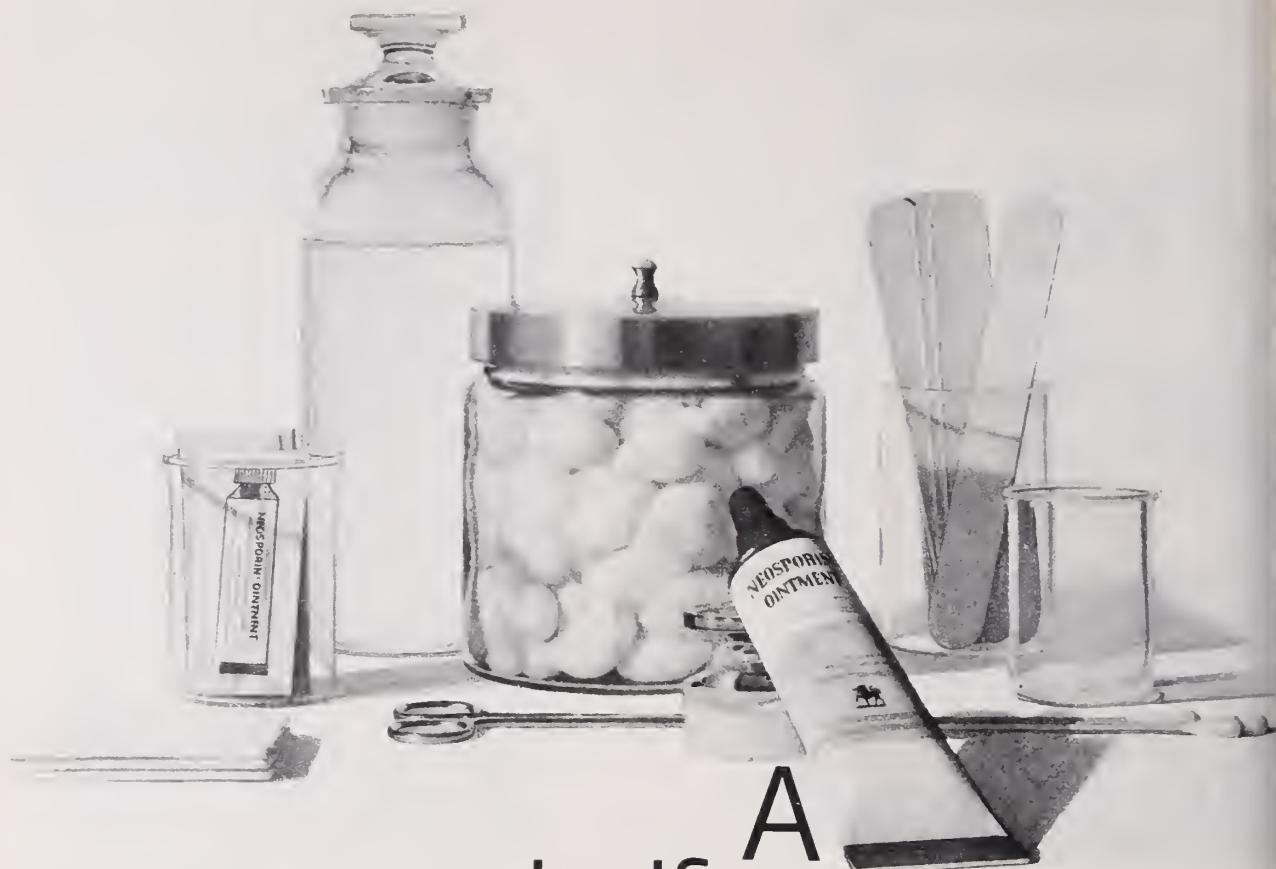
Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

• Effective against susceptible E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis and, less frequently, Proteus vulgaris



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started.

In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare.

Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced.

Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment (polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where

absorption of neomycin is possible. In burns where more than 20 percent body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Department



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

When your number comes up, will you be ready?



There are lots of ways to make \$1,000,000. Unfortunately, you can't count on any of them.

But if you should ever find yourself looking for more reliable ways to help your investments grow, we can help.

First, because we bring years of professional experience to your investment situation, we can help you do a better job of financing your investment

objectives.

And secondly, if our record of making money grow is any indication, we're almost sure to be a help in attaining those objectives. In fact, we'll gladly match our performance

record against anybody else's.

Call Mr. Evans at 278-6607.

You can count on him to show you how easy it is to make the necessary arrangements. And you'll probably find that the service costs much less than you think.

Trust & Investment Division, Industrial National Bank, 100 Westminister Street, Providence, Rhode Island 02903.

IN BANK

Industrial National Bank

Something extra in Investment Management.

We have a specialty too. Office interiors.



ROITMAN & SON, INC.

Fine Furniture and Accessories

161 South Main Street, Providence, Rhode Island 02903
Telephone (401) 861-6010

Open Monday and Thursday evenings until 9.
Convenient terms • Free parking
Delivery arranged beyond local area.

We plan and furnish professional offices of any size, from the carpet up. Our professional interior designers work with you or with your architect. Our people are not only highly talented, they are experienced. Furnishing your office can be one thing you don't have to worry about. Just call us. 861-6010.



Introducing NUVEEN TAX-EXEMPT BOND FUND Check-a-Month Plan Series 60

The coupon below will bring information on how to obtain income which is entirely exempt from Federal income taxes, in the opinion of counsel. This new series consists of 200,000 units—each of which offers you a share in a \$20,000,000 par value portfolio of professionally selected municipal bonds. The Fund's chief objectives are conservation of capital and tax-free return. Participants receive a monthly check for their proportionate share of the tax-free interest. For a free prospectus, call or write your nearest Nuveen office or:

WAYNE E. CROSS

1349 West Shore Road, Warwick, R. I.—738-4574

representing

INVESTORS DIVERSIFIED SERVICES

Please send me information of the Nuveen
Check-a-Month Plan.

Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____

**NUVEEN
TAX-EXEMPT
BOND FUND**



Copies of the Prospectus may be obtained in any State only from a dealer which may offer these Units in such State.

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue

Cranston, R. I. 02920

(401) 943-1884

RIPSRO, Inc.

Soon expects conditional designation

by

DHEW

Join with almost 1,000 physicians
who are RIPSRO members — become
a part of the review process.

NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Hopkins

Profile "20"

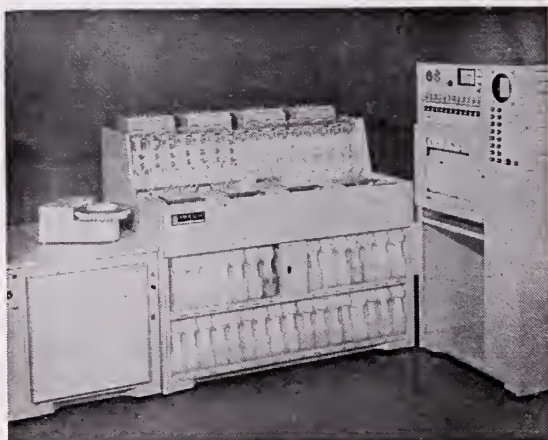
Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES

\$15.00



Hopkins Medical Laboratory

335 BROADWAY

PROVIDENCE, R. I. 02909

TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)



Pro-Banthine

brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE

Searle & Co.

San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co., Medical Department, Box 5110, Chicago, Ill. 60680

'Antiacid' action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action — Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action — Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action — Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine® (propantheline bromide)

a good
option
in peptic
ulcer

In most cases of
sustained moderate hypertension,
ALDOMET[®] (METHYLDOPA|MSD)
usually offers more
than effective lowering
of blood pressure...



**With ALDOMET
(Methyldopa, MSD),
existing renal function
is usually unchanged**

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.



**With ALDOMET
(Methyldopa, MSD),
cardiac output is
generally unchanged**

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.

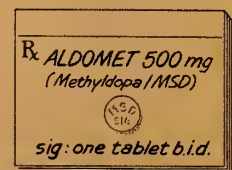
to further
simplify therapy
for many patients

now available
ALDOMET[®] 500 mg
(METHYLDOPA | MSD)

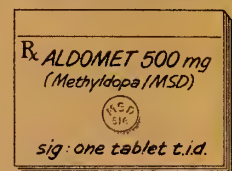
- often more practical to prescribe
- easier for patients to remember

Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day. Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

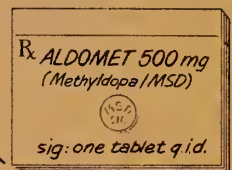
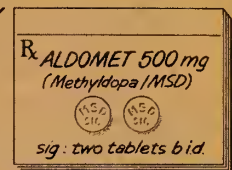
1.0-g
daily
dose =



1.5-g
daily
dose =



2.0-g
daily
dose =



NOTE: Tablets shown are not actual size.

With ALDOMET
(Methyldopa, MSD),
symptomatic postural
hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

or sustained
moderate hypertension

TABLETS, 250 mg and 500 mg

ALDOMET[®]
METHYLDOPA | MSD

a unique antihypertensive agent

Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.



in sustained moderate hypertension

ALDOMET[®] (METHYLDOPA|MSD)

usually lowers blood pressure effectively



Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyl dopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyl dopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyl dopa. If a positive Coombs test develops during methyl dopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyl dopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyl dopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyl dopa, the drug should not be reinstituted. When methyl dopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyl dopa is stopped.

Should the need for transfusion arise in a patient receiving methyl dopa, both a direct and an indirect

Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyl dopa. If caused by methyl dopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyl dopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyl dopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyl dopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyl dopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, be seen during initial therapy or when dosage increased. Headache, asthenia, or weakness be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatulence, and diarrhea occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue, "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic. Edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychotic disturbances including nightmares, reversible psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyl dopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncopal attacks in older patients has been related to increased activity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower dosage. Tolerance occasionally seen either early or late but more likely between second and third year after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyl dopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyl dopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your physician representative or see full prescribing information, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

BOOKS RECEIVED FOR REVIEW

(Continued from page 188)

- tory. Amsterdam, Associated Scientific Publishers, 1974.
- Ciba Foundation Symposium 27 (n.s.) SIZE AT BIRTH. Amsterdam, Associated Scientific Publishers, 1974.
- (Ciba Symposia may be purchased from: American Elsevier Publishing Company, Inc., 52 Vanderbilt Avenue, New York, New York 10017. A list of prices may be obtained from: Medical Education Division, CIBA Pharmaceutical Company, Division of CIBA-GEIGY Corporation, Summit, New Jersey 07901)
- HANDBOOK OF POISONING by Robert H. Dreisbach. Eighth Edition. Los Altos, Lange Medical Publications, 1974. \$6.50
- CURRENT SURGICAL DIAGNOSIS AND TREATMENT by b. Englebert Dunphy, Lawrence W. Way, and Associate Authors. Second Edition. Los Altos, Lange Medical Publications, 1975. \$15.00
- TREATMENT OF CARDIAC EMERGENCIES by Emanuel Goldberger. Saint Louis, The C. V. Mosby Company, 1974. \$14.00
- RENAL DISEASE IN CHILDHOOD by John A. James. Second Edition. Saint Louis, The C. V. Mosby Company, 1972. \$23.50
- HEROIN ADDICTION IN BRITIAN. What Americans Can Learn from the English Experience by Horace Freeland Judson. New York and London, Harcourt Brace Jovanovich, 1973-1974. \$6.95
- URINARY TRACT INFECTION AND ITS MANAGEMENT. Edited by Donald Kaye. Saint Louis, The C. V. Mosby Company, 1972. \$22.50
- CURRENT MEDICAL DIAGNOSIS & TREATMENT by Marcus A. Krupp, Milton J. Chatton, and Associate Authors. Los Altos, Lange Medical Publications, 1975. \$13.50
- IN DEFENSE OF THE BODY. An Introduction to the New Immunology by Roger Lewin. New York, Doubleday & Company, Inc., (Anchor Paperback), 1974. \$2.50
- STROKE AND ITS REHABILITATION. Edited by Sidney Licht. Volume Twelve of the Physical Medicine Library. New Haven, Elizabeth Licht, Publisher, 1975. \$20.00
- REVIEW OF MEDICAL PHARMACOLOGY by Frederic H. Meyers, Ernest Jawetz, and Alan Goldfien. Fourth Edition. Los Altos, Lange Medical Publications, 1974. \$10.50
- HANDBOOK OF LEGAL MEDICINE by Alan R. Moritz and R. Crawford Morris. With the Assistance of Charles S. Hirsch. Fourth Edition. Saint Louis, The C. V. Mosby Company, 1975. \$10.25
- AWAKENINGS by Oliver Sacks, New York, Doubleday & Company, Inc., 1974., \$7.95
- CANCER DIAGNOSIS IN CHILDREN by L. D. Samuels. Cleveland, CRC Press, Inc., 1973. \$26.00
- STRESS WITHOUT DISTRESS by Hans Selye. Philadelphia & New York, J. B. Lippincott Company, 1974. \$6.95
- PEDIATRIC THERAPY. Edited by Harry C. Shirkey. Fourth Edition. Saint Louis, The C. V. Mosby Company, 1972. \$34.50
- THE MALNOURISHED MIND by Elie A. Shneour. New York, Doubleday & Company, Inc., (Anchor Paperback), 1974. \$6.95
- HANDBOOK OF PEDIATRICS by Henry K. Silver, C. Henry Kempe, and Henry B. Bruyn. Eleventh Edition. Los Altos, Lange Medical Publications, 1975. \$7.50
- EPILEPSY by Alvin Silverstein and Virginia B. Silverstein. New York, J. B. Lippincott Company, 1975. \$5.50 hardcover; \$1.95 Paperback
- GENERAL UROLOGY by Donald R. Smith. Seventh Edition. Los Altos, Lange Medical Publications, 1972. \$8.50
- HANDBOOK OF PSYCHIATRY. Edited by Philip Solomon and Vernon D. Patch. Third Edition. Los Altos, Lange Medical Publications, 1974. \$8.00
- EMERGENCY CARE. Assessment and Intervention. Edited by Carmen Warner Sproul and Patrick J. Mullanney. Saint Louis, The C. V. Mosby Company, 1974. \$12.50

(Concluded on next page)

CARDIAC ARREST & RESUSCITATION by Hugh E. Stephenson, Jr. Fourth Edition. Saint Louis, The C. V. Mosby Company, 1974. \$45.50

IMMEDIATE CARE OF THE ACUTELY ILL AND INJURED. Edited by Hugh E. Stephenson. Saint Louis, The C. V. Mosby Company, 1974. \$6.95

DIAGNOSIS AND TREATMENT OF THYROID DISEASES by Kenneth Sterling. Cleveland, CRC Press, Inc., 1975. \$26.95

IS IT WELL WITH THE CHILD? A Parent's Guide to Raising Mentally Handicapped Children by Susan Strauss. New York, Doubleday & Company, Inc., 1975. \$7.95

ALLERGY MANAGEMENT IN CLINICAL PRACTICE by Louis Tuft. Saint Louis, The C. V. Mosby Company, 1973. \$29.75

Medical Department, United States Army. NEUROPSYCHIATRY IN WORLD WAR II. *Overseas Theaters*. Office of the Surgeon General. Department of the Army, Washington, D.C., 1973. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. \$16.20

SOCIOLOGICAL ASPECTS OF DRUG DEPENDENCE. Edited by Charles Winick. Cleveland, CRC Press, Inc., 1974. \$39.95

ALPHAGENICS by Anthony A. Zaffuto with Mary Q. Zaffuto. New York, Doubleday & Company, Inc., 1974. \$6.95



E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

3 HOME CARE PHYSICIANS

Full time, private practice in metropolitan Providence private homes, senior citizen homes, nursing homes, other home care facilities. \$50,000 to \$70,000 salary agreements or guarantees. Write:

WILLIAM E. REEVES, M.D.
P. O. Box 2346
Providence, R. I. 02906

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
HOpkins 7-8050

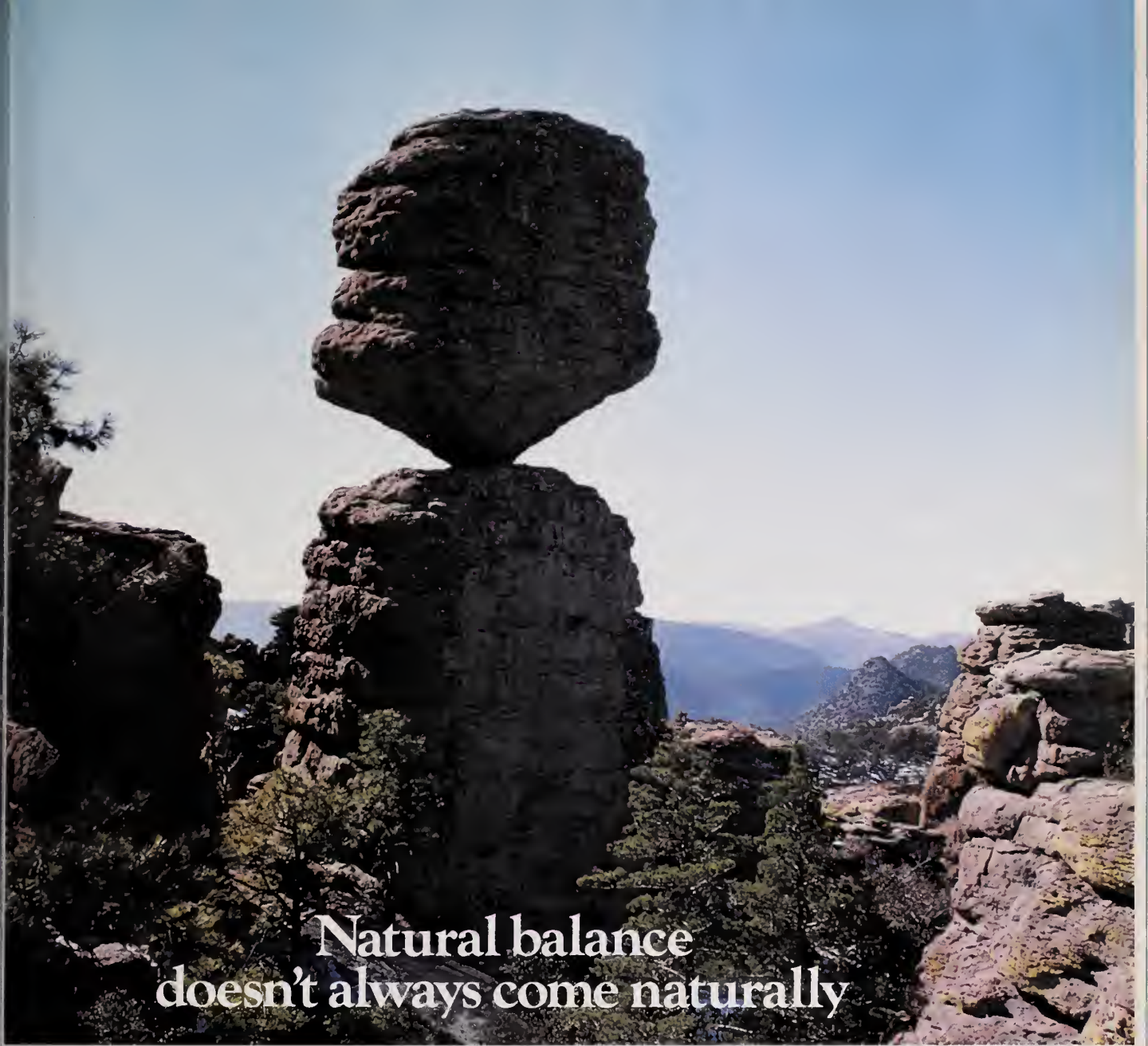
PHYSICIAN'S OFFICE FOR RENT

RUMFORD — RESIDENTIAL SECTION

FIRST FLOOR — 5 OR 6 ROOMS

FORMER FAMILY PHYSICIAN'S 19 YEARS

Call Evenings 521-6738



Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

and useful in the management of vertigo* associated with diseases affecting the vestibular system.

to relieve nausea and vomiting often associated with vertigo.*
Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
is also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
Antivert/25 (meclizine HCl) 25 mg. Chewable Tablets for vertigo, nausea, vomiting and dizziness associated with motion sickness.

SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Probably Effective: Management of vertigo associated with diseases affecting the vestibular system.

Additional classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.


Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG **Pfizer**
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert[®]/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

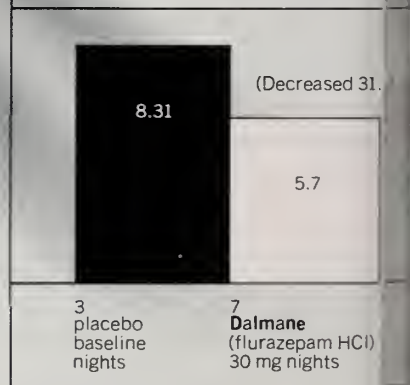


Would sleep with fewer nighttime awakenings benefit your patients with insomnia?

Highly predictable results for your patients with trouble staying asleep...

...can be obtained with Dalmane (flurazepam HCl). As shown below, Dalmane significantly reduces nighttime awakenings⁴

Average Number of Nighttime Awakenings
(Four Geographically Separated Sleep Research
Laboratory Clinical Studies, 16 Subjects)



and for those with trouble
falling asleep or sleeping
enough...

Dalmane (flurazepam HCl)
delivers excellent results.
Clinically proven in sleep research
laboratory studies: on average,
within 17 minutes that lasts
8 hours.⁵

Dalmane (flurazepam HCl)
is relatively safe, seldom
causes morning "hang-over",
and is well tolerated. The
usual adult dosage is 30 mg h.s.,
even with elderly and debilitated
patients, limit the initial dose to
15 mg to preclude oversedation,
drowsiness or ataxia. Evaluation of
possible risks is advised before
prescribing.

REFERENCES:

Macan I, Williams RL, Smith JR: The
laboratory in the investigation of sleep
disturbances. Scientific exhibit at
the 4th annual meeting of the American
Geriatric Association, Washington DC,
Oct 6-7, 1971

West JD Jr: A system for automatically
recording sleep. Scientific exhibit at the
annual Clinical Convention of the
American Medical Association, Boston,
Nov 9-Dec 2, 1970; and at the 42nd annual
scientific meeting of the Aerospace Medical
Association, Houston, Apr 26-29, 1971

Engel GW: Data on file, Medical Depart-
ment, Hoffmann-La Roche Inc., Nutley NJ
Bement WC: Data on file, Medical Depart-
ment, Hoffmann-La Roche Inc., Nutley NJ
Data on file, Medical Department,
Hoffmann-La Roche Inc., Nutley NJ

When prescribing Dalmane (flurazepam
HCl) please consult complete product
literature, a summary of which follows:

Indications: Effective in all types of insomnia
characterized by difficulty in falling asleep,
frequent nocturnal awakenings and/or early
morning awakening; in patients with recurring
insomnia or poor sleeping habits; and in
acute or chronic medical situations requiring
sleep. Since insomnia is often transient
and intermittent, prolonged administration is
usually not necessary or recommended.

Contraindications: Known hypersensitivity
to flurazepam HCl.

Warnings: Caution patients about possible
combined effects with alcohol and other
CNS depressants. Caution against hazardous
occupations requiring complete mental alert-
ness (e.g., operating machinery, driving).
Use in women who are or may become preg-
nant only when potential benefits have been
weighed against possible hazards. Not
recommended for use in persons under 15
years of age. Though physical and psycho-
logical dependence have not been reported
on recommended doses, use caution in
administering to addiction-prone individuals
or those who might increase dosage.

Precautions: In elderly and debilitated, initial
dosage should be limited to 15 mg to preclude
oversedation, dizziness and/or ataxia. If
combined with other drugs having hypnotic
or CNS-depressant effects, consider potential
additive effects. Employ usual precautions
in patients who are severely depressed, or
with latent depression or suicidal tendencies.
Periodic blood counts and liver and kidney
function tests are advised during repeated
therapy. Observe usual precautions in
presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness,
lightheadedness, staggering, ataxia and
falling have occurred, particularly in elderly

or debilitated patients. Severe sedation,
lethargy, disorientation and coma, probably
indicative of drug intolerance or overdosage,
have been reported. Also reported were
headache, heartburn, upset stomach, nausea,
vomiting, diarrhea, constipation, GI pain,
nervousness, talkativeness, apprehension,
irritability, weakness, palpitations, chest
pains, body and joint pains and GU com-
plaints. There have also been rare occurrences
of sweating, flushes, difficulty in focusing,
blurred vision, burning eyes, faintness,
hypotension, shortness of breath, pruritus,
skin rash, dry mouth, bitter taste, excessive
salivation, anorexia, euphoria, depression,
slurred speech, confusion, restlessness,
hallucinations, and elevated SGOT, SGPT,
total and direct bilirubins and alkaline
phosphatase. Paradoxical reactions, e.g.,
excitement, stimulation and hyperactivity,
have also been reported in rare instances.

Dosage: Individualize for maximum beneficial
effect. *Adults:* 30 mg usual dosage; 15 mg
may suffice in some patients. *Elderly or
debilitated patients:* 15 mg initially until
response is determined.

Supplied: Capsules containing 15 mg or
30 mg flurazepam HCl.

Depend on highly predictable results with

Dalmane[®] (flurazepam HCl)

One 30-mg capsule h.s. — usual adult dosage
(15 mg may suffice in some patients).

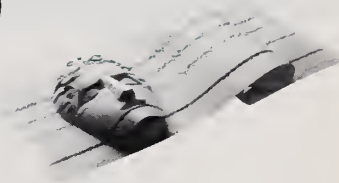
One 15-mg capsule h.s. — initial dosage for
elderly or debilitated patients.

specifically indicated for insomnia

Objectively proved in the sleep research laboratory:

- sleep with fewer nighttime awakenings
- sleep within 17 minutes, on average
- sleep for 7 to 8 hours, on average,

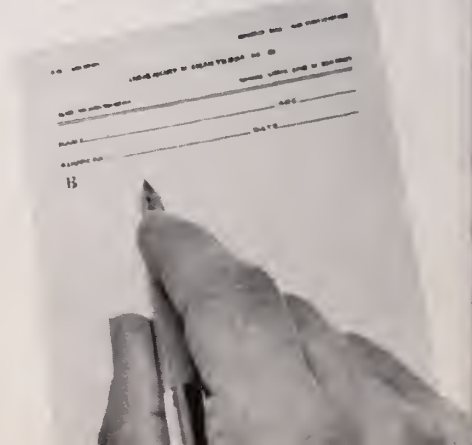
with a single h.s. dose.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Bioequivalence



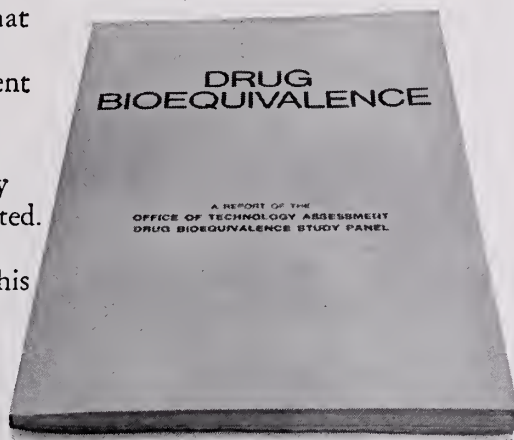
The weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that patient's safety and effectiveness just because the chemical content is the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the United States has weighed in on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:
...the problem of bioinequivalence is a real one. Since the studies in the lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Protecting the integrity of our prescription

**Doctor. Are you deriving the
most benefit from all your effort?**

Get our Thorough Three-Part Financial Checkup.

**Let us analyze your
OVERHEAD**

**Examine and/or Design your
RETIREMENT PLAN**

**Review and Provide Full & Continuing
FINANCIAL PLANNING**

We are New England Physicians Advisory Services, Inc.

We are the only one-stop full financial service for Physicians in New England

We are the servicing agent for The Council of the New England State Medical
Societies members retirement plan.

No charge for initial survey. For further information contact:

New England Physicians Advisory Services, Inc.

One Wells Avenue, Newton, Mass. 02159 (617) 965-5100





Robert Burroughs Internist, Kathy Ohara and Art Horwich.

POST-PRANDIAL SLIDE SHOW



PHYSICAL DIAGNOSIS



**One contains aspirin.
One doesn't.**



Darvocet-N[®] 100

100 mg. propoxyphene napsylate
and 650 mg. acetaminophen



**Darvon[®]
Compound-65**

65 mg. propoxyphene hydrochloride,
227 mg. aspirin, 162 mg. phenacetin,
and 32.4 mg. caffeine

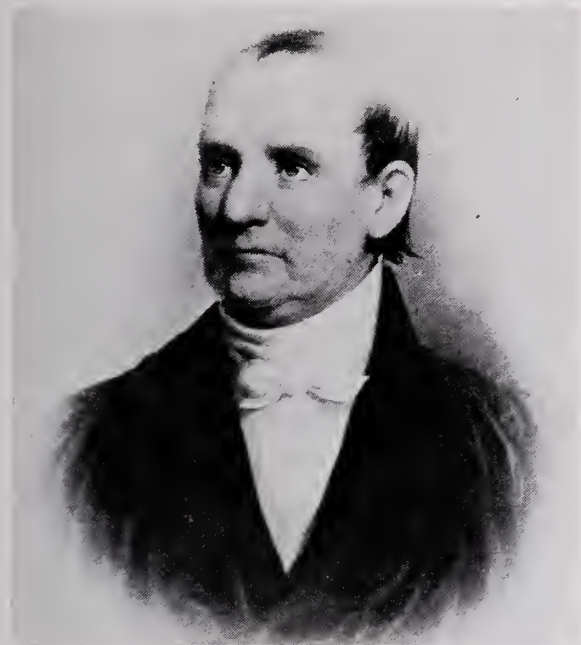
Lilly

Additional information available to the profession on request.
Eli Lilly and Company, Inc., Indianapolis, Indiana 46206

Traditions

Once Again Brown University Trained Physicians Will Emerge To Practice The Art And Science Of Medicine

By Horace Martin, Ph.D.



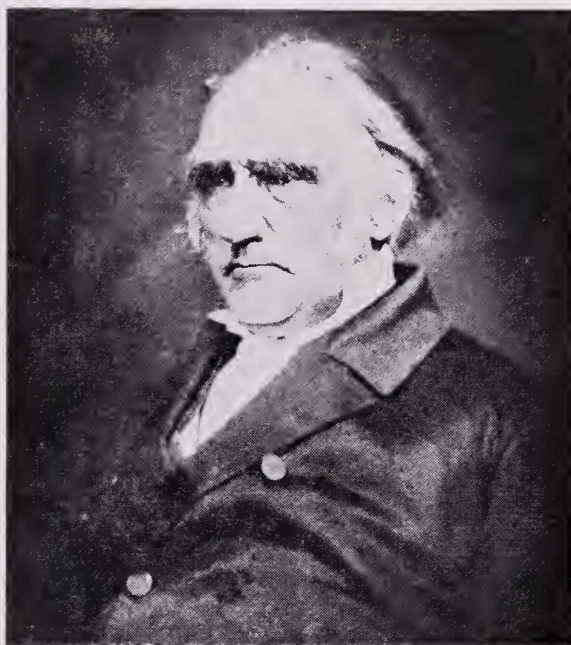
Asa Messer

After 148 years, Brown University medical students will once again vow “. . . in purity and holiness to enter the house of the sick; . . . with joy and respect to practice our art.”

Their voices will join with those of 1827, the echo whispering back to a medieval time, the sound reaching far into a Periclean Age.

No matter how the wording of the Hippocratic Oath is changed to suit our time, it will still serve to bind us to all other physicians who have pledged themselves to a program of medical ethics. Though it is admittedly a very ancient statement composed by an unknown physician who was impressed with Pythagorean ideals, surprisingly enough it still continues to hold meaning for us.

The oath is a private statement of an obligation freely accepted. It is the acceptance of a self-imposed discipline to continence, privacy, and obligation to our fellow man. Because so much clinical teaching is done on a one-to-one basis, it is symbolic of a covenant between the novice and the practitioner. It is a statement of voluntary rule and voluntary obedience.



Francis Wayland

This oath was transmitted to us through the ages by the curricula of the medieval universities, no doubt because its tenets were so nearly in agreement with scholastic philosophy. But the Pythagorean God, who forbade suicide, fostered purity, dispensed justice, and counseled forbearance, was and still is the same God of the Jew and the Christian. This oath was embraced through the ages by the Arabian mystic, the medieval doctor, the independent thinker of the Renaissance, the scientist of the Enlightenment, the rationalist of the last century, and the experimentalist of our time. We are joining them in this pledge to a private humanitarian ideal in the conduct of our professional affairs.

After taking the oath, our class will march to the quadrangle to join the other Brown graduates. White-spined Puritan churches will sound their bells, and carillon strains will mark the pace as the procession assumes a time-honored order, as observed in ancient universities: first comes the banner of the University, then the B.A. candi-

(Continued on next page)

dates, followed by the Masters' Candidates, and finally the doctors of medicine, philosophy, and theology. The position of greatest honor is the last.

As we march into the quadrangle, some will think of those who sat here 148 years ago, and they may wonder about the tradition that led to the conjunction of universities and schools of medicine.

In Providence around 1810, practitioners of the art of medicine asked the already-thriving University to confer upon them and some of their students a symbol of knowledge and humanitarian commitment. Brown University responded by awarding 95 medical degrees between 1816 and 1828. The University contributed courses in anatomy, material medica, chemistry, and ethics, but the practical skills were taught outside of the University's walls. The link was tenuous, and broke easily under an administrative ruling that all faculty should become full-time teachers, and in effect relinquish their private practices.

The scene in Providence was a *déjà vu* of the evolutionary process that led to a marriage of medical associations and universities in the middle ages. This joining evolved in two different modes. In one there first existed a medical association, and to it was added the *studium generale*. In other instances, a newly formed medical association petitioned a school where the *studia* was in existence, seeking to have its students of medicine granted university status. The first procedure was attempted at Montpellier, where a medical corporation existed in definite form from 1220 to 1240. It was a *Rotulus* of students and practitioners of medicine. However, it did not enjoy an established curriculum until 1309, when Pope Clement V prescribed one in great detail together with the rights and privileges of the faculty. As might be expected, this school was less interested in scholastic methods than in the practical arts, and in modern terminology it might be said to have been scientifically oriented. It produced a physician Pope John XXI, but it also produced Arnold of Villanova, who, although declared anathema, will forever be blessed for introducing potable gold (brandy) into the pharmacopoeia. Alchemy was taught and pursued by Montpellier graduates, who sought potable gold as a sovereign elixir against disease.

For an example of the second route, wherein a medical group requested association with an

existing school of *studia generale*, we note that at the University of Paris, the group of teachers and practitioners working at the Hotel Dieu and St. Julian le Pauvre had a working arrangement that was formalized in 1281, and the acts and deeds of the faculty of medicine became the deeds of the university. The character of the University of Paris was more scholastic and more concerned with theoretical arguments of a theological nature than with clinical facts. This was the forerunner of our internal medicine. Incidentally, no surgeons were allowed to teach here until the arrival of Renaudot, who was a graduate of Montpellier in the 17th Century. Even then a royal edict was required to grant him teaching privileges.

Paris was strictly a clerical school, and its graduates followed the rules of celibacy until 1451. By contrast, the faculty and graduates of Montpellier were more liberal and set much store in the Arabian pharmacopoeiae and clinical observation. They had a habit at Montpellier of deriding the scholastic traditions at Paris. In turn, it was said in Paris that the Montpellier degrees were sold for cash. The schools had scarcely begun when these creative tensions arose.

Other schools had similar developments, and the corporation in Bologna finally evolved a definite working arrangement in 1306. Furthermore, it appears that the University of Paris conferred the first true medical degrees, and the events in Providence in 1815 followed closely the evolutionary pattern of the University of Paris.

The surgeons, however, fared badly in their attempts to have the universities officially recognize them as learned men. At Paris, even as recently as 100 years ago, the law and the physician looked upon the surgeon as a manual laborer. In 1371 the University of Paris started to examine surgeons for licensure. But of course the examining was done by physicians, a practice that lasted until 1577. The training in surgery at Paris consisted of a master surgeon engaging a barber-surgeon as his apprentice. The education was carried out at surgical headquarters at St. Comé. The University of Paris did not recognize the corporation at St. Comé, but the surgeons imitated the Paris faculty of medicine. They spoke only Latin and wore robes and bonnets. Degrees were awarded in spite of the unconcealed anger of the physicians. A medical colleague said of a surgical fellow: "Hair oil sellers, miserable rascals, toothdrawers . . . they talk of giving licentiates, which is positively

indecent in the case of these lackeys . . . con-
 ceited trash." In their attempt to imitate the
 physicians at Paris the faculty at St. Com   com-
 mitted the ultimate absurdity. They refused to
 perform any operations at all, declaring this to be
 manual work and beneath their dignity. Instead,
 the St. Com   surgeon took a barber-surgeon with
 him to perform the "manual labor" when he visited
 a patient. Surgery was forbidden unless supervised
 by a Paris physician, so the St. Com   doctor would
 then direct the barber-surgeon in the procedure.
 It was inevitable that the barber-surgeon would
 become the master of the system, and indeed the
 school was taken over by the barbers in 1655.
 After much intrigue, deception, and lobbying, this
 sad state of affairs was brought to an end by royal
 intercession. The King's surgeon had surgery de-
 clared a part of the *studia generale* in 1699. From
 this point on the surgeon was considered to be a
 physician, with the full rights of the M.D. degree.

The right to practice has always been a preroga-
 tive granted by society. The members of the cor-
 poration at Montpellier had the right to practice
 from 1180, when William the Count gave the
 school approbation, although degrees were not con-
 ferred until 1309. It is interesting to note that
 some of the men who received the first Brown
 medical degrees between 1816 and 1827 had been
 licensed to practice medicine by the Rhode Island
 General Assembly years prior to their participa-
 tion in formal courses at Brown.

All of the members of our Commencement pro-
 cession will be in costume. Academic costume, the
 "haberdashery of success," though no longer worn
 except on the occasion of scholarly conclave, was
 the daily form of attire for the physician until
 the 17th Century. The regalia consisted of the
 cap, the hood, and the gown. There were three
 types of caps: the round bonnet, the *biretta*, and
 the *bonnet carre*. The round bonnet looked like
 a round velvet cap without a visor and was the
 ordinary headwear of the laity. The rigid and
 somewhat square headgear with a tump was called
 the *biretta*. The square cap seems to have origi-
 nated in Italy. It was known as the *bonnet carre*,
 or *pileus quadratus*, and our present-day square
 cap is derived from it.

The dress worn by the clergy in the early middle
 ages was no different from that of the laity. Every-
 one from the highest to the lowest class, as well
 as the clergy, wore a loose cape with a hole for
 the head to pass through, a hood to protect the
 head in bad weather, and a slit in front for the

passage of the arms. The hood had a long tail,
 called the *liripipe*, which was sometimes wound
 turban-like around the head, or worn as a scarf
 about the shoulders. The hood had at least three
 uses: as a head covering, as a cape, and as a bag
 into which alms were placed.

The closed cape, the forerunner of the academic
 gown, was the only part of the regalia that was de-
 rived formally from clerical garb. At Bologna and
 Paris it came to be regarded as the academic dress
 for formal occasions for Doctors of Theology and
 for holders of the Master's degree. The lay minori-
 ties in law and medicine wore the same dignified
 costume of the day, the *Cappa Manicata*. This was
 a closed dress, shorter than the cassock, with full
 elbow-length sleeves.

No exact code of color was observed at all uni-
 versities, but there were certain tendencies. Black
 was usually the color associated with theology,
 and green, yellow, and sanguine red symbolized
 medicine, while blue was reserved for philosophy,
 and scarlet represented Canon Law. As both noble-
 men and commoners could be found in an academic
 procession, a touch of fur bordering the gown,
 cap, or hood was used as a sign of nobility.

Originally, "doctor," "master," and "professor"
 were equivalent terms and merely designated a
 learned man, but during the 14th Century the title
 of doctor began to be used instead of master for
 the highest degree at the Faculty of Canon Law
 and Medicine. The Bachelor of Arts degree was
 awarded after the first *viva voce* public examina-
 tion, and the Master of Arts was awarded after
 two further years' study of philosophy. In Italy
 the doctorate was earned after an additional two
 years and became a necessary requirement for
 academic success.

As we gaze about the quadrangle and admire
 the vivid colors of the academic regalia of various
 universities, our thoughts may wander back to the
 assorted steps that were undertaken prior to ad-
 mission as candidates for the M.D. degree. The
 process has changed surprisingly little in form. In
 the medieval university the student of medicine
 presented himself for a preliminary examination
 at the end of his second year, which lasted for
 three days and has been described as covering
 natural things, unnatural things, and those caused
 by nature (the basic sciences). After this examina-
 tion, one was expected to deliver an impromptu
 dissertation on an axiom of Hippocrates. After
 passing this basic science examination, the candi-

(Continued on next page)

date studied for two more years, during which time he witnessed dissections and was called on to defend a thesis on a weekly basis.

The final examinations were again *viva voce*. They were personal ordeals, beginning at 6 a.m. and continuing until mid-day. From 6 to 8 a.m., the candidate studied and prepared the answers to such questions as "Should a decoctum of onion be administered to a drunken man?" From 8 to 11 a.m. he had to refute all objections to his answer, which were put forth by the board of nine examiners. The last hour was reserved for the interrogation of the student on some subject outside of his thesis. The candidate also had to provide in an adjoining room a cold buffet, with wine and beer, to which the examiners could from time to time repair for refreshments, although the candidate himself could not partake of it. Finally, having proven himself in the clinical sciences, the fledgling Bachelor in Medicine paid a ceremonial call on the parliament, the courts, and the provost of the University of Paris. Upon visiting the archbishop, he received the license to practice medicine. But before beginning practice most bachelors took the doctorate degree by undergoing still another examination and defending still another thesis.

In the medieval university the conferring of the medical degree was a curious affair. There was music, usually by violinists, while the candidate walked up and sat in a chair next to the dean or rector. After sitting for a few moments he then rose and walked down from the platform. Similarly, after we receive our degrees we shall walk away from the president, deans, and faculty and leave the University through the gates of the quadrangle, which will be opened, symbolically, towards the city. Thus once again Brown University-trained physicians will emerge to practice the art and science of medicine among our fellow men and women.



Dr. Pierre Galletti



Dr. Elizabeth Leduc

Dr. Stanley M. Aronson

The Flexible Curriculum At Work

Many Unique Options Are Made Possible By Brown's Flexible Medical Curriculum

By Anthony Caldamone

In recent years planners of medical school curricula have wrestled with the trend toward more flexible programs, more individualized curricula, and a greater freedom of choice on the part of the student. Brown has what I consider to be a moderately flexible program. This has been a strong publicity factor for the Medical Education Program, and has also raised many an eyebrow. In this paper I shall examine some of the subjects which students from the Class of 1975 have explored in their elective time, particularly during the two clinical years of the program (the final two years).

From the start the reader should be aware of the "clinical requirements" at Brown. The minimum required exposure can be broken down as follows:

General Medicine Clerkship	12 weeks
General Surgical Clerkship	12 weeks
General Pediatric Clerkship	5 weeks
Obstetrics and Gynecology Clerkship	5 weeks
Psychiatry Clerkship	6 weeks
Community Health Clerkship	6 weeks
Further Clinical Work	10 weeks

This would allow approximately 18 weeks of purely elective work. As one would expect, the majority of students have spent the 18 weeks in further clinical electives at both affiliated and non-affiliated hospitals.

The Curriculum Committee allows three months of clinical elective work to be taken at hospitals not affiliated with Brown. This three-month guideline can be negotiated with the proper authorities, and there have been special cases in which students were allowed to take additional time away from the campus for a variety of good reasons. Many students have used this time to become acquainted with hospitals where they were considering applying for residency programs. Others simply wanted to enjoy a new and different experience in some exotic health care system. There have been 28 students of the 58 in the Class of 1975 who have done clinical clerkships away from Brown for a total of 74 months, averaging 2.7 months per student. Five students have taken clinical work outside of the continental United States. These include a hematology clerkship at the Avicenna Hospital, Kabul, Afghanistan; an ophthalmology elective at St. Jude's Hospital, St. Lucia, British West Indies; a general pediatrics experience at the University of Hawaii; both neurology and pulmonary electives at McGill University, Montreal, Canada; and a medical elective at the Kendu Mission Hospital, Kendu Bay, Kenya. In several cases these extra-continental electives were directly supervised by Brown faculty members, while in other instances students arranged the electives on an

(Continued on next page)

ad hoc basis, and assurance was made for satisfactory direct clinical supervision. More recent exceptional offerings which have become available for Brown students on a formal basis include an unusually intensive family practice exposure at the Vinalhaven Medical Center, Vinalhaven, Maine; a medical experience in the depressed area of the Appalachians, entitled The Frontier Nursing Service in Leslie County, Kentucky; and a tropical medical experience at the Federal University of Sergipe, Sergipe, Brazil.

Coming back to the United States and, more specifically, to the greater Brown campus, 53 per cent of the Class used their elective time in experiences at the affiliated hospitals only. It would be an arduous task to list all the elective offerings here at Brown, but suffice it to say that there is rarely a Curriculum Committee meeting that goes by without a number of elective proposals being discussed and approved. Some of the more popular electives have been pulmonary disease, cardiology, dermatology, ophthalmology, nephrology, infectious disease, radiology, and gastroenterology. Furthermore, a number of students (12) have chosen to spend part of their elective time as "sub-interns" either in medicine or pediatrics.

A great portion of elective time has also been devoted to active research. From an historical point of view, research is certainly at the very core of the Brown curriculum. The medical program began as a Master of Medical Science program in which students were required to do original research work, either clinical or in the basic sciences, and then submit a research thesis in partial fulfillment of the M.M.S. stipulations. I believe that time will prove the students in the Class of 1975 to be unique in that so many of them have spent so many hours of elective time in the laboratories. Rather than have the reader believe that this was completely by choice or predilection, it should be noted that the majority of the class was enrolled in the M.M.S. program at one time and therefore developed strong roots in various laboratories on campus and at affiliated Hospitals early in their undergraduate years. Ten students from the class have already received the M.M.S. degree (this includes four transfer students who earned their degrees at Rutgers University before coming to Brown), and 10 more members plan to receive

the degree in June, 1975. This does not include a number of students who have received other advanced degrees from Brown and other institutions.

There have been 18 students who have chosen to spend elective time in the last two years of the program doing research work: eight on campus, 10 with hospital-based faculty. The list of research work is much too long to enumerate here, but some examples of the subjects pursued are: synergism of immunosuppressive agents, biological activities of purine derivatives, immunocompetence studies of methotrexate, maternal-fetal immunological interactions, alternate pathway activation of the complement system, polymyositis, aldosterone metabolism, serotonin receptor binding, pigeon breeders disease, fructose metabolism, the sympathetic innervation of the kidney, and platelet adhesiveness. One thing that does become evident from the number of students in the class who have done research work is that not all of those who are engaged in research are writing theses or working towards the M.M.S. degree. (The thesis is not required for the M.D. degree.)

Still another unique feature of the Brown medical curriculum is the opportunity to take courses offered at the University at any time during the undergraduate or medical years. This option has been relatively underutilized by the Class of 1975, possibly because of the intrinsic insecurity of being the first class to be exposed to a brand new clinical clerkship program. In spite of that there are three brave souls who are currently enrolled in University courses and studying enzyme chemistry and special topics in music. In the future it is likely that more clinical clerks will take advantage of this unusual opportunity.

Thus it is evident that there are many unique options made possible by Brown's flexible medical curriculum, and that our class has taken full advantage of these opportunities. Members of the class have used their elective time to explore alternative modes of health care, study at other medical schools and hospitals, do extensive research, and take University courses for which they may not have had time as undergraduates. I believe that this broad range of experiences and variety of interests can only make us better, more flexible physicians and individuals.



The Class Of 1975: A Differential Diagnosis

The Prognosis Is Probably In The Direction Of Primary Health Care, Specialized Or General

By Peter LeWitt



A Nineteenth century Phrenologist's model, used for the diagnosis of character and moral fiber.

By way of introduction, this diagnostic exercise will be worked through, as are most in the medical model, by reference to what lies in the history. This class is distinctive in having little more in common than the determination to become physicians; this is significant.

The Program in Medical Sciences at Brown was launched slightly over a decade ago, with every intention on the part of the founders of selecting and inspiring a future elite, in the sense of George Thorn's term, of the physician-scientist. Original plans included the likelihood that about half of each class would decide on careers in research

which would lead them away from clinical medicine after a preliminary introduction.

Flexible individualized curricula were original guidelines. As summarized by the first director of the program, Doctor Mac Edds, much of the early planning was aimed at revising medical education by "becoming more truly graduate education, by emphasizing scholarship, independent study, and selectivity in approach to subject matter." Many of those who spent their medical training and, in some cases, all of their higher education in this program have found this model appealing to some extent, and have engaged in a wide range of specialized research interests. But the majority of the class has turned to the equally diverse realm of clinical medicine, and will be pursuing careers that, at least for the present, will keep them among patients and out of laboratories. From my vantage point, which has included seven years within the Medical Science Program and a few months elsewhere, there has been considerable evolution away from Brown's original program, which may well be a microcosm of changes currently in process on a much larger scale in medicine.

To review the history of this class, it is of interest to examine the many entrance points of the 58 members. Some 68 students entered in 1967 through 1969 as freshmen in the fledgling Master of Medical Science Program, expecting to complete only two years of preclinical medical

(Continued on next page)

education here. A significant number of freshmen discovered that they had checked the wrong box on their application forms, or found that their career interests had changed (as do almost half of all undergraduates in general). Twelve more joined the remaining 36 Medical Science students in 1971 with their undergraduate education completed and, in some cases, with advanced degrees, their total years in higher education ranging from six to 12 years. In 1973, the 48 members of the class were joined by 10 third year students from other American medical schools to expand the class to its approved maximum size, as determined by accrediting bodies in the previous year. Some 22 per cent are women — one of the highest percentages in the nation's graduating classes this year. Notable, too, is the absence of the so-called minority student, although affirmative action policies have long been a part of admissions policies. The definition of a Rhode Island resident is an elusive one, and although 45 per cent of the class will pursue their post-graduate medical education in the state, very few are native Rhode Islanders. None have come from other Rhode Island colleges, much to the dismay of local politicians.

The collective experiences of the class have been diversified, not only by genes and a lack of stereotyped profiles at the admissions office, but also by the fortuitous lack of an isolated medical campus. For those who participated in the combined undergraduate-graduate program, undergraduate life was relatively free of the pressures that most pre-meds are saddled with. Although the first years at Brown were vigorous and demanding with the standard load of basic lab sciences, there was approximately one half of course slots (but certainly not free time) open for studies and even concentrations in the liberal arts and other fields. The concept of a "crash" course to accelerate undergraduates into medical studies has been avoided here as it has not been elsewhere. Rather, a number of low-key exposures to medicine and its world were designed for students from freshman year on. As the Valhalla-like structure of the Bio-Med Center arose in the midst of the campus, undergraduates in the Medical Science program of the late 1960s were brought into hospitals, face-to-face with patients long before formal medical studies began. Among efforts to introduce awareness of the behavioral manifestations of different states of health, a novel program involving the analysis of psychiatric themes in dramatic presentations was appended to a less-than-encompassing class-

room treatment of the behavioral sciences. In many ways the curriculum leading into formal medicine was flexible and had to be adapted by each individual to meet relevant needs. It is not surprising that even among the medical faculty there was and still is a wide range of opinion over what constitutes the optimal or even minimal elements of core, pre-clinical studies. The attrition of the faint-hearted in the undergraduate years left a hardened core of students in a beginning program, not necessarily wishing to be guinea pigs, but quite able to cope with the insecurities of this experiment in medical education.

If there is anything genuinely novel about this program, however, it is that medical education follows with continuity the caliber of a very high quality of undergraduate education at Brown. Exams were frequently of the essay type, and lectures frequently posed more questions than they answered. Once engaged in the final four years of the program, the class found a recently-assembled faculty waiting to teach them an organ systems approach to medicine after a first year of the more traditional disciplines. In the summer between the first two years, a hospital-based course in the approach to the patient and physical diagnosis was taught. With a new role and its knowledge at hand, this was a period of a steep learning curve, when the process of memory seemed a poor substitute for true genius and wisdom. The didacticism of the lecture hall (at Brown, an echo-filled chamber with the barest of walls) was the traditional format of learning most were familiar with, but as the patient became more important to the learning setting, supplementary kinds of learning experience became important. The ability to acquire skills with accuracy and dexterity was necessary, and among other tools to be developed was the critical faculty to size up the reliability and importance of medical information from both man and machine. Above all, it was desirable to hold on to whatever vestiges of common sense had survived to this late date. In the final two years of the program students were given the freedom to schedule their required clinical experiences among their chosen elective subjects. It was at this point, for weeks at a time, that the baptism of "total immersion" in the medical arts came to pass. For many it was more than a taste of the future.

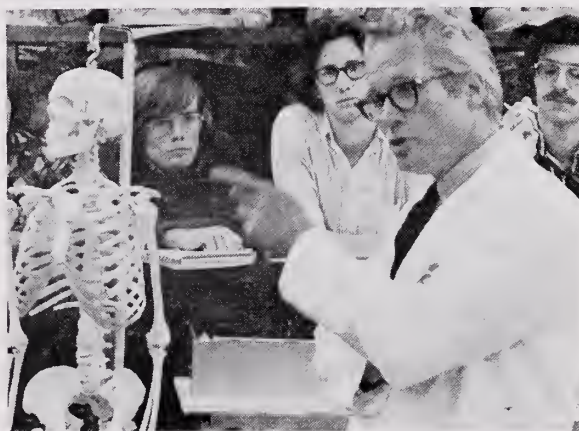
Included as undercurrents in the formal training of clinical medicine were the inevitable exposures to the stresses and emotional impacts of health care in many contexts. Amid the glories

of diagnoses well made and people made well were the frustrations of seeing life slip away, of advice not taken, of the great extent of neglect and self-infliction of poor health. Often there was the chance occasion to participate in or witness a situation where it was not the professional knowledge *per se* but other features of the doctor-patient relationship that worked a special kind of magic, which sometimes seemed to require grey hairs or special words not found in the medical lexicon. The ability to use a variety of communicative modes became just as challenging as learning the many languages that disease speaks in man. Above all, many of these signal experiences required rather personal adjustments to maintain one's equilibrium and sense of humanity within the population with which we have chosen to work.

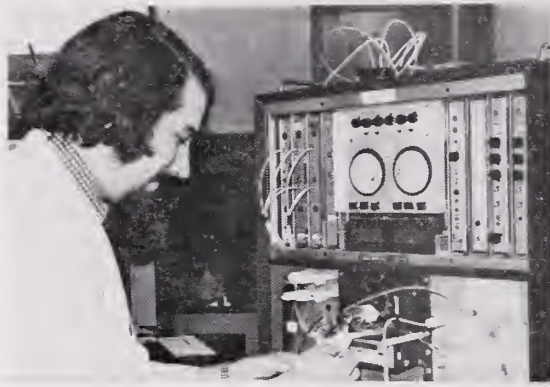
Most members of the class, in many moments of their recent lives, would rather care to think that their training and immediate concerns lie strictly within the environs of medical practice, in hospitals and medical offices. It is imposing enough to consider the spectrum of material that must be mastered as a physician in 1975, without adding to these concerns. And yet, medical education as we have experienced it has shielded many grim realities and crises in the world around us, situations which so often have their basis in deficiencies of health care and related services. Although it may have reached a Golden Age in terms of technological achievement, medicine carries a long history of great inequalities in the distribution and accessibility of health care. The traditions of medicine have also preserved, fortunately, the pre-eminence of an ethical and ideal view of health over the economical or the practical. Although it can hardly be spelled out as distinctly as in, say, the management of acute illness, the physician's role involves not only service as a practitioner but also a role as a unique authority in the definition of health and the priorities that its pursuit should take. The ability to function in this latter sense may call for the temporary suspension of the mechanistic mode of thought so prevalent in medical thinking, and the emergence of other skills. The concern has been raised by a recent commentator on medical education. Donnell Boardman, that the mountainous array of scientific facts and the student's response to them "may initiate a climate that must suppress spiritual inspiration and human relations." If the ability to function as a scientist has predominated in the

selection and education of doctors, then the notion of a medical "elite" has become well established in such institutions as Brown. But perhaps the medical training ground has been wisely designed to teach only that which can be taught. In that case, it may be that the desirable and elusive qualities of the humane physician are waiting to be gleaned from experience and example.

My original aims to produce a differential diagnosis of the class of 1975 will have to end without the description of a pathological specimen, for I find the body sound and sane. The prognosis is probably not for a new breed of physician, as the original planners would have seen it, but in the direction of a recent national trend towards primary health care, specialized or general. And towards this purpose, our degrees from Brown and all that went into them will certainly be of service.



Dr. George E. Erikson and Friend

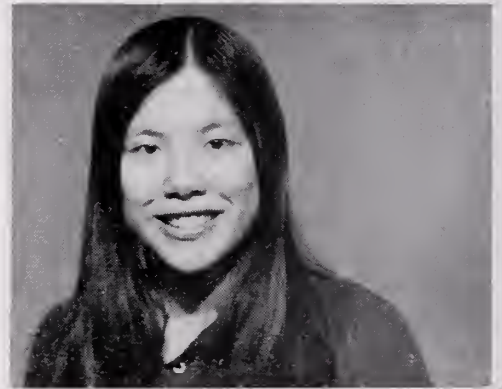


REID COLEMAN was born in St. Charles, Illinois. His next most important accomplishment before coming to Brown was becoming a full fledged member of the Larchmont, New York Fire Department. (He is still on their rolls as an active member, and must be the only person in the class who grew up to be both a fireman and a doctor.) He added to his accomplishments after his arrival here in 1968 by becoming a lab technician at The Miriam Hospital. Upon leaving Brown he plans to go into internal medicine, and accomplish still more.

Internal Medicine, The Miriam Hospital, Providence, R. I.

KATHY OHARA (whose name, incidentally, is not Irish) came to Brown all the way from her home state of Hawaii, and joined the M.M.S. program in 1968. While a student, she conducted research in the pharmacology of cancer drugs. She enjoys playing the guitar and meditating, and is renowned for her talent for giving great parties. Her career plans involve clinical pediatrics.

Pediatrics, Los Angeles County-University of Southern California Medical Center, Los Angeles, Calif.



ARAM ARABIAN came from Cranston, and studied engineering at Boston University. He joined the M.M.S. program after several years of research and six years in the National Guard. His research interests were in the area of lipid metabolism, and he is an avid fan of hockey and the theater. He plans to practice internal medicine.

Internal Medicine, location undecided.

DANIEL SMALL is from Long Island, New York, and was a Brown undergraduate in the M.M.S. program. His research was on fructose metabolism and its effects on risk factors for arteriosclerosis, and he was a student member of the Admissions Committee. He enjoys soft rock and other types of music, and plans to practice internal medicine.

Internal Medicine, Roger Williams General Hospital, Providence, R.I.





ROBERT MEYER was born in Lynn, Massachusetts, and now lives with his wife in North Attleboro, Mass. He came to Brown in 1967, and had some rewarding experiences with children as an undergraduate working in the Brown Youth Guidance and Progress for Providence programs. He also gave guitar lessons to emotionally disturbed children at Bradley Hospital. Motorcycles, woodworking, and science fiction occupy his spare time. His research was in the area of penicillin allergy. He plans to practice internal medicine in a rural area, possibly Maine, but is still considering pediatrics as well.

Internal Medicine, The Miriam Hospital, Providence, R.I.

ELIZABETH CORRIGAN'S home town is Providence. She did her undergraduate work at Manhattanville College, and earned Master's Degrees from both Boston College and Brown. She wants to go into internal medicine, and is interested in both direct patient care and in participation in the instruction of house officers and medical students in a teaching hospital.

Internal Medicine, Rhode Island Hospital, Providence, R.I.



STUART BOE came to Brown from Portland, Oregon. He plans to do a medical internship before surgical or medical cardiology training. He has worked as a clinical biochemist during the past five years, and enjoys mountaineering, distance running, theater, and traveling. On his six (consecutively owned) motorcycles, he has toured half the States and the Canadian Provinces.

Internal Medicine, Rhode Island Hospital, Providence, R.I.

MARK BLUMENKRANZ grew up in New York City and Binghamton, New York, and enrolled in Brown's M.M.S. program in 1968. He has been an intercollegiate sailor, a professional musician, a jazz and modern art aficionado, and an aspiring printmaker. He has done research on cyclic AMP, and plans a career in academic surgery. "The doctor who claims to know only medicine, probably doesn't even know that." — (loosely attributed to Mark Twain).

Surgery, Stanford University Hospital, Palo Alto, Calif.



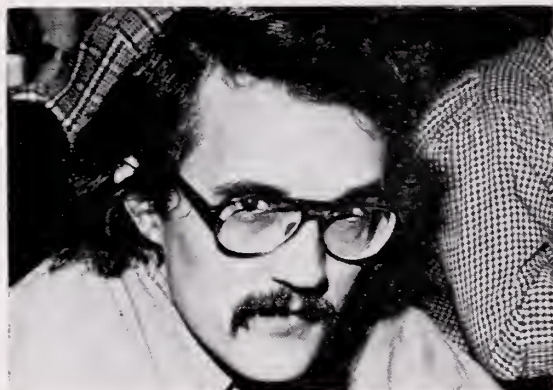
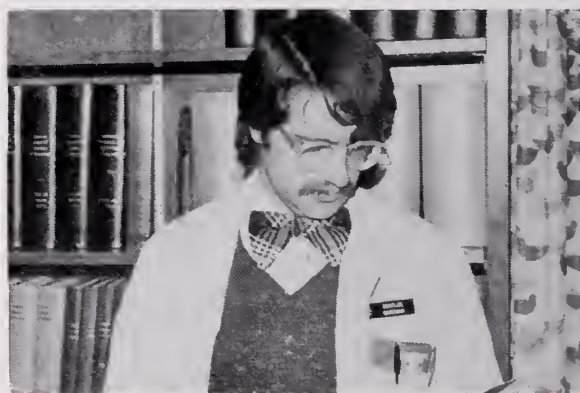


GEOFFREY BERG grew up in Melrose, Massachusetts. He graduated from Yale, cum laude, in 1970, then attended the Medical College of Wisconsin from 1970 to 1973 before transferring to the Brown Program in Medicine. He plans to practice internal medicine, and his interests include sports, camping, woodwork, and Common Cause. "If we possess our WHY of life, we can put up with nearly any HOW." — Nietzsche.

Internal Medicine, Roger Williams General Hospital, Providence, R.I.

CHARLES BAREHAM grew up in Gowanda, New York, and entered the M.M.S. program as a freshman in 1968. As an undergraduate he was a member of the varsity crew team, sang in the Brown Chorus, and developed a strong interest in Latin and the classics. He has performed research on the interactions of cancer agents on metabolites, and plans to go into internal medicine.

Flexible Medical Internship, Portsmouth Naval Hospital, Portsmouth, Va.



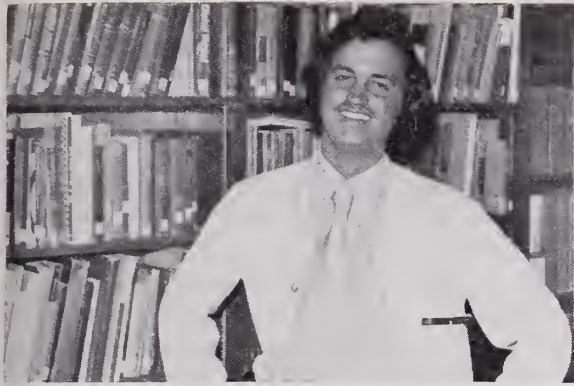
JOHN HORNEFF came to the Brown M.M.S. program from Swarthmore, Pennsylvania, where his father was a pathologist. His non-medical passions are chess and photography, and he is known for showing up everywhere with a camera. He is particularly interested in the research aspects of medicine, and plans to follow his father's example by becoming a pathologist also.

Pathology, University of Chicago Hospital and Clinics, Chicago, Illinois.

MARILYN STEARNS was born and bred in Passaic, New Jersey. She graduated from Wellesley College, then spent her first two years of medical school at S.U.N.Y. Downstate before transferring to Brown. She plans to do a residency in pediatrics, followed by either subspecialty training in that field or by family medicine.

Pediatrics, Rhode Island Hospital, Providence, R.I.



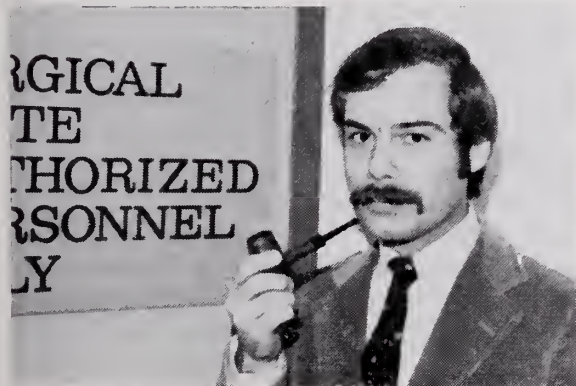
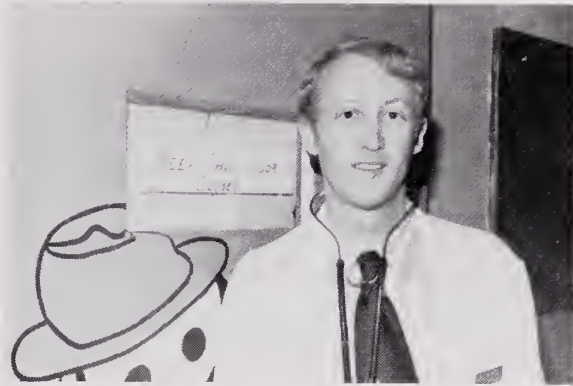


ROBERT STARZAK was born in Woonsocket, grew up in neaby Attleboro, Massachusetts, and graduated from Brown in electrical engineering. After spending half of his senior year in various hospitals around the country, he is planning a pediatric residency in southern California. "To love more is the willingness to suffer more." — Tolstoy.

Pediatrics, Los Angeles County-University of Southern California Medical Center, Los Angeles, Calif.

RICHARD HARBISON was born in Pittsburgh, Pennsylvania, the son of a career Air Force family. He graduated from Radford High School in Hawaii before coming to Brown in 1967. After graduating cum laude in 1972, he attended Rutgers Medical School and received the M.M.S. in 1973 before transferring to the Brown Program in Medicine. He is married to Doris Lundbrg, M.D. (Tufts 1974), who will enter a residency in medicine at U.C. Davis while Rick begins a pediatrics residency at David Grant Medical Center, Travis Air Force Base, California.

Pediatrics, David Grant Medical Center (Travis AFB), Fairfield, Calif.



ALEXANDER SWISTEL was born in Munich, Germany and grew up in Princeton, New Jersey. He did his undergraduate work at Harvard, graduating in 1971, and earned his M.M.S. at Rutgers Medical School in 1973 before transferring to Brown. He is interested in surgery, motor cars, and music (he is an accomplished classical pianist, and also plays the cymbals), and plans to go into the field of thoracic surgery. "Illegitimum non carborundum; domines savum fac."

Surgery, St. Luke's Hospital, New York, N.Y.

BRENT DAVIS came to Brown from Oklahoma and has interests which include a vegetarian diet, plants, Sanskrit, and Gnosticism. He is currently a medical intern at Roger Williams General Hospital, and plans a career in some form of family practice. He and his wife, Vicki, will probably remain in the Rhode Island area.

Internal Medicine, Roger Williams General Hospital, Providence, R.I.



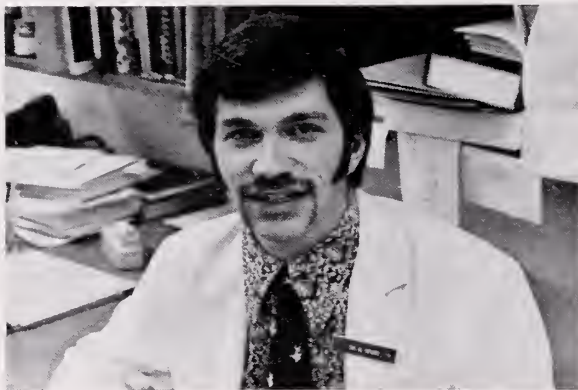


ED COLLINS is presently involved in a rotating internship at The Miriam Hospital. He came to Brown from SUNY in Albany, where he majored in biology with strong interests in research. He has worked diligently on the establishment of a family practice residency program at Brown, and is planning a career in family practice himself.

Pediatrics, Rhode Island Hospital, Providence, R.I.

PATRICIA MYSKOWSKI comes from Bethesda, Maryland and completed her undergraduate work at Brown. She has done research in cardiovascular surgery and plans to go into internal medicine "for a while." She is also particularly interested in psychiatry.

Internal Medicine, Rochester General Hospital, Rochester, N.Y.



DONALD NENNO, the son of a physician, was born and brought up in Buffalo, New York. He came to Brown in 1968, with an interest in sports which was continued in swimming and water polo. He has done work on the immunology of pregnancy, and ultimately plans a career in orthopedics in the Northeast.

Surgery Categorical*, Rhode Island Hospital, Providence, R.I.

WILLIAM GRAHAM lived in New York until he came to Brown as a freshman. After spending six or seven years on the East Side, he now considers himself a Rhode Island resident. He has done biomedical research at The Miriam Hospital dealing with the mechanism of aldosterone, and is interested in a career in internal medicine in the New England Area. He is interested in sports, especially in informal participation, and in carpentry, television, and films. His personal philosophy is Facultative Utilitarianism fashioned after Bentham and Mills. "Qui Bono."

Internal Medicine, Rhode Island Hospital, Providence, R.I.



Family Practice

Author Hopes For Knowledge And Skill To Provide Continuing And Comprehensive Care To His Patients

By Louis Hogrefe

Family practice is by definition that branch of medical practice concerned with continuing and comprehensive health care of patients in the context of their family and community life. I am writing as a fourth-year medical student who will as of July 1, 1975 be in the first year of a family practice residency, and I find this definition to be a good one. For example, as a family practitioner I should like to be a physician who sees to the needs of the children in my practice. These people are young, fresh, and growing, and I want them to develop with healthy minds and bodies. When they enter the adolescent years with all of the associated uncertainty, confusion, and changes in their bodies, I do not want to hand them their records and say goodbye to them and their problems. I want to continue to see to the care of these people whom I know so well. Included in a family practice, besides the children, will be the fifty-year-old businessman who is coughing up blood, the sixty-year-old waitress with varicose veins, the weekend fisherman with a lure buried in his leg, the cattle rancher who gets severe chest pain whenever he scoops corn, the alcoholic school teacher, the old man in a nursing home with pain in his Right Lower Quadrant, the high school football player with a mangled knee, and the eighty-year-old widow who lives alone in a ten-room house with no one to talk to and no one to cook for but herself. As a family practitioner I shall occasionally need help in providing health care to these and other patients, but I shall know when and where to get another physician's assistance. To develop the knowledge and skill needed to be a good family

practice physician seems like an impossible task at times, but a good start down the path is a family practice residency.

Most family practice residencies are set up as three-year programs, and, although there is some variation among the different programs, most of the residencies consist of the following:

First year:

Medicine	4 months
Pediatrics	3 months
Obstetrics-Gynecology	2 months
Surgery	2 months
Emergency Room	1 month

One half-day per week is spent in the family practice clinic.

Second year:

Medicine	4 months
Pediatrics	3 months
Obstetrics-Gynecology	1-2 months
Surgery	1-2 months
Psychiatry	0-2 months
Electives	0-2 months

Three half-days per week are spent in the family practice clinic.

Third year:

Medicine	0-4 months
Pediatrics	0-3 months
Obstetrics-Gynecology	0-1 month
Psychiatry	0-2 months
Preceptorship	0-4 months
Electives	2-12 months

Five half-days per week are spent in the family practice clinic.

Aside from comparing the three-year curricula listed in the brochures, one must also consider the fact that many of the institutions offering family practice residencies also have residency programs in medicine, surgery, pathology, and other specialties. The presence of associated residency programs can be an advantage in that such an institution has more experience in post-graduate education and may have more full-time faculty and a better-equipped physical plant. However, in some of these institutions family practice residents must take an unofficial back seat to residents in other programs.

In addition to considering the curriculum and the presence or absence of associated programs, one must remember that most family practice residencies are relatively new, and are still in early and varying stages of development. One must scrutinize these prospective programs even more carefully than other more established residencies.

In accepting the definition of a family practice as a goal, and in choosing a good family practice residency, I hope to begin to develop the knowledge and skill needed to practice a kind of medicine that provides for the continuing and comprehensive care of the patients that I serve



Drs. Peter and Babette Stewart



Dr. Robert Parks and Dr. Paul Calabresi



Dr. Herbert Constantine and Dr. Milton Hamolsky

Family Practice

The Goal Of Family Practice Preparation Should Be Preventive Medicine As Well As Top-Quality Training

By Joseph DiLorenzo

With basically the same feelings about family practice as those expressed by Lou Hogrefe (feelings reinforced by observing the frustrations patients have with the present highly-specialized, but usually fragmented, medical care available to them), I had decided last year to prepare for a primary care practice in which I could deal with the whole person, indeed the whole family, rather than just an organ system. Lou has suggested that the acquisition of the knowledge needed to become a competent family practitioner may seem like an impossible task. In fact, the question of how best to prepare for a primary care practice is one that several members of our class had to ponder this year.

All of the clinical instructors I spoke to at the Brown affiliated hospitals and institutions, with one notable exception (Doctor Charles E. Millard), strongly advised against my pursuing a family practice residency. I received the impression that family practice physicians were looked upon as second-class doctors, no more competent than the old-fashioned general practitioner, and it was further implied to me that there was a possibility that board-certified family practitioners might not be granted full admitting privileges at Rhode Island Hospital or The Miriam Hospital. While some of the people I spoke with seemed genuinely concerned about the quality of the training re-

ceived in family practice programs, it seemed that there were other considerations as well, and that various specialists I talked to felt threatened by the prospect that the family practitioner might be competing with them in certain phases of their practices.

Having gathered these opinions, I set out for a nine-week elective in family practice on the island of Vinalhaven in Penobscott Bay about 16 miles off the coast of Maine. Doctor Ralph P. Earle has practiced medicine there for the past 38 years. Working with the health planning council of the town, he has developed a modern, well-equipped medical center, and (in my opinion) is providing a somewhat better quality of medical care to the people of Vinalhaven and the smaller islands than is often found in the typical practice in Rhode Island. My nine weeks there convinced me that it is certainly possible to keep up to date and to maintain an excellent level of medical expertise even in a relatively isolated area, if one learns how and when to use good specialists for consultations as the need arises. However, I found that the isolation and the often severe workload in such a remote area are a definite deterrent to practicing there.

Searching for a family practice residency program last fall that would provide a high level of

(Continued on next page)

training in the broad fields of internal medicine, pediatrics, office obstetrics-gynecology (OB-GYN), and office surgery turned out to be a frustrating experience. Preferring to remain in the northeast, I confined my applications to the New England states, New York, and Pennsylvania. There seemed to be no clear consensus even in the minds of the administrators of the 12 family practice programs available as to what their overall goals should be. Some programs are preparing residents for practices restricted to medicine and pediatrics, while other programs are including an equal emphasis on OB-GYN, and it is fair to say that none of the programs in the northeast (as opposed to those of the mid-west) are emphasizing surgery beyond simple office procedures.

There are basically two different approaches to organizing a family practice program. On the one hand there are those programs centered in large university hospitals with organized programs in other areas. In these programs the family practice resident is sometimes considered by the specialists there to be a second-class doctor just passing through his rotations. In some programs two family practice residents are assigned to a position ordinarily held by one resident in internal medicine, so that each can spend half of his or her time in the model family practice center. This might fragment the hospital experience, but then one often hears questioned whether so much hospital experience is really necessary. The other type of program is the one set up as the only residency program in a general hospital. In this situation there is no competition with specialists for patients, and there are no petty squabbles within the hospital for prestige. But there often appeared to be a tendency to under-utilize specialists during the training program.

During some interviews with family practice program directors an anti-intellectual attitude surfaced which was difficult to swallow. One student was told that basic scientific research had no place in family practice, and that he should expect to refer about a third of his patients for definitive care. Another student was told that it was not important to learn the pathophysiology of diseases, but rather to be able to recognize them for proper referral. In effect, he was to become a triage nurse.

All of these programs are disorganized and still in the formative stages, experiencing growing pains similar to those we have felt at Brown during the past eight years. Of the 12 programs I visited I

considered applying to three (Maine Medical Center; Lancaster, Pa.; and York, Pa.), but after some reflection about what I considered to be the relatively poor quality of the other nine programs, I had second thoughts about a family practice residency. Perhaps a better way to prepare for practicing primary care, at least in the northeast, is to complete two years of internal medicine and two years of pediatrics, thus qualifying for both the American Board of Internal Medicine and the American Board of Pediatrics. I think that this would avoid certain political problems in our hospitals, and perhaps give an adequate level of post-graduate training and leave open the possibility of continuing research.

What will still be lacking in this alternative to family practice training, however, is practical experience in the office practice of general medicine and pediatrics, for none of our hospital clinics approach a typical office practice; and in rotations through hospital wards one sees only the two to five per cent of people who are allegedly sick enough to be in a hospital. In the hospital one sees the patient in an isolated block of time, and usually has no long-term follow-up and no way of evaluating the results of hospital treatment. The goal of a family doctor should be to keep his or her patients well and out of hospitals by emphasizing preventive medicine and paying close attention to all the patients' problems, rather than by practicing just crisis medicine. The goal of family practice preparation should be to teach this attitude, as well as to provide top-quality training in all of the appropriate disciplines.



Faiza Etsrup, Mark Blumenkranz, Jon Gell, and Bonnie Saks

Women In Medicine: The Natural Thing

Women Anticipate In The Near Future A Natural And Normal Role In The Health Care System

By Jane Herrod Joiner

Medical students are relatively new to the Providence hospitals, but the number of women students is even more of a novelty for patients and doctors alike. Brown is emerging as a leader in a national trend which shows a radical increase in the enrollment of women in medical schools across the United States. From 1914 to 1960 the proportion of women students in U. S. medical schools edged up less than 2 per cent, going from 4 per cent to 5.7 per cent. But only fourteen years later, it had leaped to 15.3 per cent, and 19 per cent of the average freshman class in 1974 was female.¹ Brown is well above the national average, with women representing 22.4 per cent of its first graduating class this year, and 21 per cent to 30 per cent in the classes to follow.

So rapid has the change been that the school itself may have lagged behind as a result. Brown may be leading in the education of women physicians, but not very many women are doing the educating. Of the University appointments in the Division of Biology and Medicine, only 4.8 per cent are held by women — and only half of these women are physicians.² Here there is a very real "generation gap."

What is in store for this new generation of women physicians? What will be their impact on the profession?

In years past the cynics have held (too often correctly) that medical school was wasted on women because they failed to practice their profession. And among those who did practice there was always the fear of having to forsake women's tra-

ditional role entirely. "Don't become a doctor," said the parents of a prominent woman physician at Brown. "You'll turn into a man!" But with the ever-increasing numbers of women in the profession can we afford to be so pessimistic?

In this era of specialization these fears are taking a more modern form: even if women continue to practice, it is argued, they will choose less demanding fields in medicine and, as a group, will be less productive professionally. "How can you be a doctor, wife, mother, and housewife all at the same time?" That's how it was put to one of our women graduates when she was being interviewed for her internship. It's a "chauvinist" question, of course — would it be asked of a man? But it does reveal a valid problem, one perhaps more important to women than the constant annoyance of being greeted by patients with a request for the bedpan. American women, even professional women, find themselves expected to shoulder most of the home-making responsibilities. Elsewhere in the developed world there is a movement toward more equitable sharing of family responsibilities: in Sweden, for example, when a child is born to a family both the wife and the husband are granted leave from their employment to care for it. But in the United States, if a professional woman has family interests as well, she needs the freedom to work part-time for a few years while her children are young.

The fact is that there is still little room in some

(Continued on next page)

medical fields for a woman who wants to maintain something of her traditional social role. Malpractice insurance and office costs alone make it difficult to practice privately on a part-time basis. A few progressive centers are now offering flexible, part-time residency programs. But within professional circles there is still a social stigma attached to the "part-time doctor." This prejudice continues to exist in spite of the fact that the loss of some productivity resulting from a few years devoted to family and profession is more than offset by women's longer lifespan. After all, a physician's productive years often extend well beyond age 65.

Being a "wife and mother" in this country traditionally entails a much greater commitment of time than does being a "husband and father." Women are encouraged to choose certain fields which are "good for women" — dermatology, anesthesiology, pathology, research — because of the option of working shorter hours. They are discouraged from entering those fields which are "demanding" — ob-gyn, surgery, internal medicine — because of the long, irregular hours they require. As a consequence, women are urged to choose specialty fields less suited to their individual temperaments and intellectual tastes in order to achieve a life style compatible with the demands of being "wife and mother."

It is not just women physicians, but society as a whole that suffers. There are many traditionally demanding fields in medicine where more women are needed — internal medicine, family medicine, and ob gyn, to name a few. The female patient population often desires and deserves the alternative.

The case of women in pediatrics is informative, since this field is notorious for long and irregular hours and house calls. Yet it is usually included in the list of fields that are "good for women," no doubt because of a feeling that women and children "go together." And women do choose pediatrics. Within the major Brown-affiliated hospitals, where roughly ten per cent of the house staff and fellows are women, only a few are willing to brave such traditionally male bastions as ob-gyn and surgery. But more than forty per cent of them are in pediatrics.

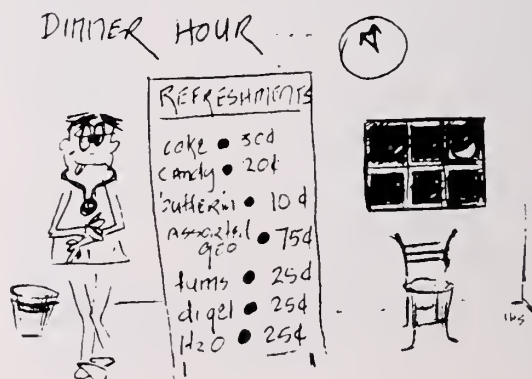
Not all of these women are entirely forsaking their family roles. There must be some adjustments made within the field to meet the special needs of women. The inference is inescapable: if women can be successful in a field as demanding as pediatrics and maintain a life style that is socially and per-

sonally acceptable, they can do the same in any field.

Clearly women are in medicine to stay. As long as they are expected to share an unequal portion of the responsibility for the maintenance of home and family, American medicine is going to have to make some accommodations. Women physicians look forward to the time when they can practice their profession naturally, and when a women physician in any field is no longer looked upon as a novelty but as a normal part of the health care system.

REFERENCES

- ¹Dubé, WF. Women Students in U.S. Medical Schools: Past and Present. *Datagram*. JAMA 48:186-189. Feb 73
- ²Brown University Division of Biological and Medical Sciences 1974-75 Training and Research Programs Catalogue





MARY LYNN MILLER did most of her growing up in New Rochelle, New York, where she graduated from Ursuline School. She entered Brown and the Medical Science Program in 1967, and was a member of the last class to graduate from Pembroke College in 1971. After spending a year in Colorado, "gaining perspective on the world and on things in general," she returned to the medical program. "As for the future, I'm working on it."

Internal Medicine, Roger Williams General Hospital, Providence, R.I.

PAUL von OEYEN comes from Harbor Beach, Michigan. He is currently in a combined Pediatric-Obstetric (Neonatology) Internship at New York Hospital-Cornell Medical Center in New York City. He plans to complete an Obstetric-Gynecology Residency and specialize in Perinatology. His Master's thesis topic was "The Fetus as Patient: An Ethical Examination of the Humanity of Prenativity."

Obstetrics-Gynecology, The New York Hospital, New York, N.Y.



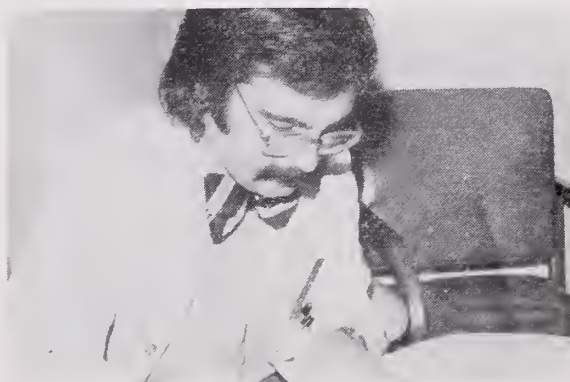
DONALD DEROLF was born and raised in Allentown, Pennsylvania, and entered Brown's Medical Science Program as a freshman in 1968. He has participated in basic research in the area of immunology of Schistosomiasis, and plans to practice primary care medicine somewhere in the Northeast.

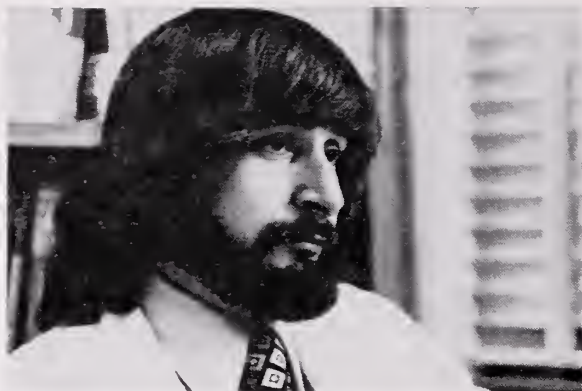
Family Practice, Pawtucket Memorial Hospital, Pawtucket, R.I.



MARK ROSEN attended Brown as an undergraduate where he did research on the mechanism of action of aldosterone under Dr. David J. Morris and Dr. Robert P. Davis. While a medical student, he reviewed the literature on cough with Dr. Sidney Braman and Dr. Richard Irwin. He plans to enter a subspecialty of internal medicine, and to pursue his interests in clinical research and teaching.

Internal Medicine, Mount Sinai Hospital, New York, N.Y.



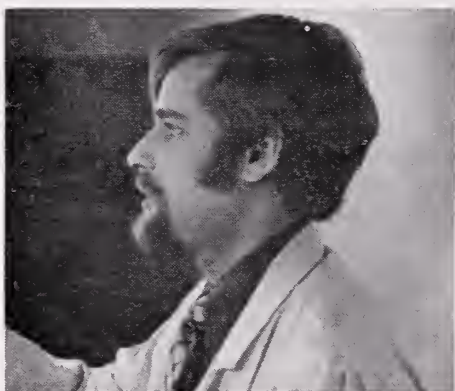


JOSEPH DiLORENZO attended St. Mary's School in Cranston, R.I., and graduated salutatorian and National Merit Finalist from Bishop Hendricken in 1967. He received his B.A. degree from Brown in 1971. He did research in immunopharmacology at the Roger Williams General Hospital, and completed the six-year program with the M.M.S. degree in 1973. He is interested in family practice.

Internal Medicine, Roger Williams General Hospital, Providence, R.I.

MAURA SANTANGELO was born in Italy, and did not speak English until she emigrated to Vineland, New Jersey when she was sixteen. She attended Douglas College at Rutgers, class of 1971, and earned her M.M.S. degree from Rutgers in 1973 before transferring to Brown. She enjoys writing poetry, and submitted one of her poems as part of her application to the Brown medical program. She plans to enter the field of internal medicine.

Internal Medicine, Roger Williams General Hospital, Providence, R.I.



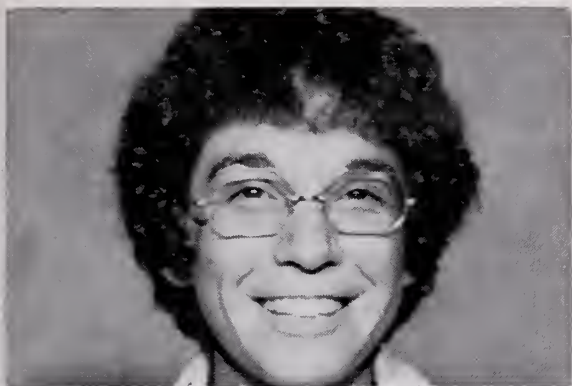
LEON ROSENBERG is a seven-year veteran of the Brown Medical Program. He comes from Rochester, New York, as does his wife, Barbara. He worked with Dr. John Fain as an undergraduate on insulin action and rat care. He plans a future in internal medicine, and lists as housemates "two small psycho animals." His favorite quote is "What else you got to eat?"

Internal Medicine, Virginia Commonwealth University Hospitals, Richmond, Va.

JEFFREY HERGENRATHER came to Brown from California, where he attended the University of California at Berkeley. After he completes his training in family practice, Jeff plans to move with his wife, Sarah, and their two children, Samuel and Nell, to northern Idaho, where they have a farm and have made their permanent home. Aside from having a rural family practice, the Hergenrathers are planning to do subsistence farming with several partners.

Flexible Internal Medicine, Medical College of South Carolina Hospitals, Spartanburg, S.C.



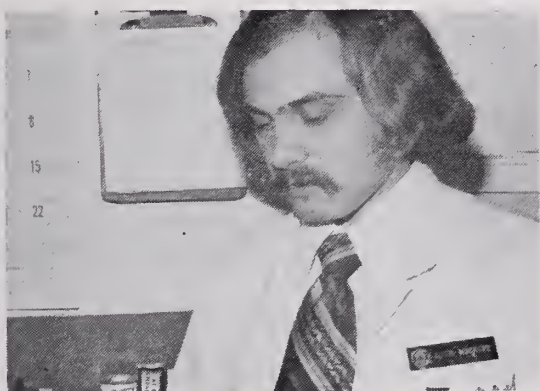


BONNIE SAKS was born in Chicago, Illinois, the first child of Seymour Saks, pharmacist, and Charlotte Shapiro Saks, Jewish mother. From these beginnings, she has traveled at different paces through different cultures, interested in the physiologic and social milieu with which we function and malfunction. She believes in comprehensive medicine and in knowing well what she knows.

Internal Medicine, Montefiore Hospital Center, New York, N.Y.

MICHAEL SHAFER is from Rochester, New York. He plans to practice internal medicine, possibly in one of its subspecialties but probably in some type of primary care format. "For me the excitement in medicine is shared between the opportunities to explore medical science and to understand and treat the patient as a fellow human being."

Internal Medicine, The Miriam Hospital, Providence, R.I.

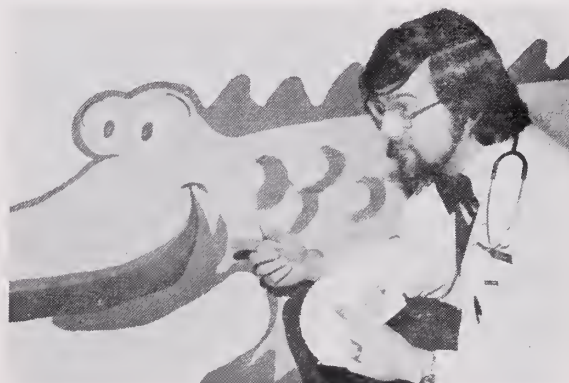


LOUIS HOGREFE transferred to Brown after completing his first two years of medical school in his home state of South Dakota. His years have included "many good people, occasional anxiety, long hours on hospital wards, and a chance to see New England." He wants to return to South Dakota to take up family practice.

Family Practice, Sioux Falls Family Practice Program, Sioux Falls, S.D.

JONATHAN ELION, from Sherborn, Massachusetts, plans to become a primary care physician in the field of internal medicine. He has spent much of his spare time on the air at WBRU-FM. He also enjoys creating his own music on six and twelve-string guitar, working part-time as a computer programmer, and entertaining patients and friends with close-up magic.

Internal Medicine Categorical*, University Hospitals, Madison, Wisconsin.



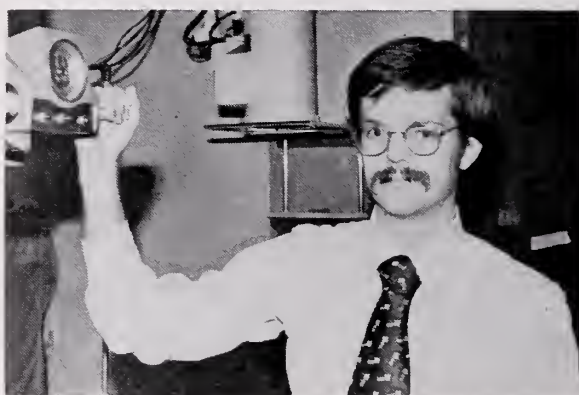


JANE JOINER was born in Maryville, Tennessee but grew up in Massena, New York. She entered the Brown Medical Program as a freshman, and has been with the program for seven years. She believes in "treating patients, not organs." She plans to train in Internal Medicine and later Pediatrics, then to practice and perhaps teach medicine with an emphasis on primary care and family medicine.

Internal Medicine, St. Elizabeth's Hospital, Boston, Mass.

CHARLES KESSLER was born and raised in the Deep South (Memphis, Tennessee, and Birmingham, Alabama), and came north to Brown as a freshman seven years ago "because of its reputation for excellence in the liberal arts with an emphasis on science." He stayed for medical school because he found Brown to be relatively progressive and innovative in developing the new program. He intends to practice internal medicine.

Internal Medicine, Presbyterian-St. Luke's Medical Center, Chicago, Ill.

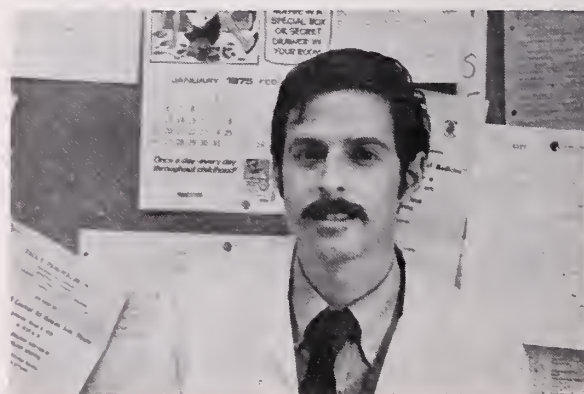


PARDON KENNEY is from Andover, Massachusetts, where he received his high school education at Phillips Academy. He came to Brown in 1968, graduating in 1972 with a B.A. in biology. He was married in September, 1972 to Kendra Marsland of Attleboro, Massachusetts. He is planning a residency in general surgery, and hopes eventually to become a pediatric surgeon.

Surgery, Rhode Island Hospital, Providence, R.I.

ARTHUR HORWICH, a native Chicagoan, transplanted himself to New England in 1969 when he began his undergraduate work at Brown. He enjoys tennis, music, and art, calling himself a "frustrated tournament player, unfinished pianist, and graduated finger-painter." His medical interests include pediatrics and endocrinology.

Pediatrics, Yale-New Haven Medical Center, New Haven, Conn.





DEAN EFFLER was raised in Paranus, New Jersey. He received a B.A. in biology from Brown in 1971. "My interests are quiet and earthy, VIZ. hiking, botany, baroque recorder music, and home-brewed wine." An important affiliation includes Faith Community Parish in Fox Point. His future goal is to be a thorough, sensitive family physician.

Pediatrics, Rhode Island Hospital, Providence, R.I.

NORMA LERNER was born and raised in Yonkers, New York, where she remained the shortest kid on the block until she was about sixteen. She graduated from Jackson College (Tufts University) in 1971, with a major in psychology. She then attended New York Medical College before transferring to Brown in 1973. She likes to dabble in sketching and other art forms, and enjoys reading fiction, particularly Virginia Woolf and Woody Allen. She plans to train in pediatrics and ultimately would like to practice primary care in a clinic setting. "To do something very common, in my own way." — Adrienne Rich.

Pediatrics, Boston City Hospital, Boston, Mass.

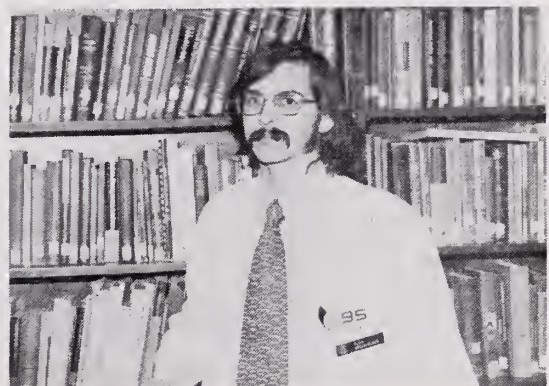


CHARLES HERBERT DOOLITTLE III, or "Terry", was born in Holyoke, Massachusetts, but calls Seekonk, Massachusetts his home town. He attended Holyoke Junior College and received his B.S. in chemistry from the University of Massachusetts in 1962. Following that, he earned an M.A. in zoology from the University of Massachusetts (1965) and a Ph.D. in pharmacology from The George Washington University (1970). His plans include clinical investigation and a residency in Internal Medicine.

Internal Medicine, Roger Williams General Hospital, Providence, R.I.

ALAN GREENGLASS was born in New York and raised in Oradell, New Jersey. He did his undergraduate work at Columbia University, where he studied engineering and developed an interest in biology. His outside interests lie in politics and folk music, and he plans to enter the field of internal medicine. "I think that we should be men first, and subjects afterwards."

Internal Medicine, Washington Hospital Center, Washington, D.C.



On The Future Of Medical Education

Medical Education Must Be Restructured To Provide Adequate Preparation For Individuals Entering All Aspects Of The System

By Mark Scott Blumenkranz

While passing by the Chaplains' Office at Brown a number of weeks ago, I happened to notice a hastily scribbled sign reading "Department of Applied Theology" beneath the heading on the door. Mildly amused by this, I recalled a sociologist's statement that graffiti reflect prevailing societal attitudes as accurately as any other written document of the day.

Since World War II there has been an increase in the number of "applied" departments in American universities, particularly in the sciences. While the application of the prefix "applied" to such disciplines as architecture and drama may seem artificial, examples of such are in existence today; witness Buckminster Fuller's designs for future living space, and the mobile unit of the New York Shakespeare Festival.

In attempting to explain these phenomena one immediately recalls the cries for educational relevance during the last decade. In essence, the Arts and Sciences are being used as instruments and prototypes of social, political, and economic reform much as they were in the mid-portion of the previous century in Great Britain. An alternative explanation exists which better reflects the mood of the "Cynical Seventies": namely that the compulsion to "apply" all science is a manifestation of the burgeoning American professionalism. The development of this professionalism is concomitant with any rapidly evolving technological society and

is exemplified in medicine by the remarkable growth of the specialties and subspecialties. These changes lead one to question whether medical schools are now in the process of mass-producing applied biologists, and what effects this "applied ideology" will have on the future of medical education and practice. A brief discussion of how social, economic, and political factors have altered medical education may now be in order.

As social critics have correctly pointed out, one of the greatest shortcomings of the "American Medical System" has been its inability to deliver adequate health care to a sizable portion of the economically disadvantaged population. This has been attributed to a relative shortage of doctors, and in fact, compared with European nations, the United States does rank tenth in its number of physicians per capita. However, this number is still larger than that of either Sweden or Great Britain, which many believe possess more efficient health care delivery systems than that of the United States.

A response to this criticism in the United States has been a gradual increase in medical school enrollments, the shortening of pre- and postgraduate training programs, and the provision of opportunities for earlier specialization. While most of these changes were recommended in the Carnegie Commission reports on Medical Education, they have contributed to what Barry Stimmel terms

the "crisis in medical education." The fault in the application of these proposals lies in the failure to provide facilities and faculty commensurate with the increased number of students. Furthermore, the distribution problem, which may be the real root of the medical shortage, has been aggravated by the provisions for earlier specialization. The net result has been a relative decrease in the number of physicians entering primary health care.

The increased concern over health care delivery has also been felt in American undergraduate institutions. The number of undergraduates headed for positions in the health care fields has risen dramatically in the past 10 years, possibly because of an increased public awareness of the financial rewards of medicine and a media-inspired glamorous image. The increase in class size and the proliferation of new medical schools have not been able to keep up with the demand. The result has been the greatest outpouring of superbly trained scientists headed for medical schools that this country has ever witnessed. While this appears at first glance to be an embarrassment of riches, it is of concern that this has added an element of "unidimensionality" to the cadre of new physicians. Where there once was a diversity of pre-professional training, now all seem to stem from the same line of "professional" pre-medical students. This almost incestuous homogeneity has also contributed to the crisis in medical education.

Finally, political considerations have also made their mark on medical education in the post-World War II era. The ready availability of federal funding coupled with the pervasiveness of the spirit of scientific advances has led to an acceleration of the research aspects of medicine at the expense of more traditional service aspects. Such ill-

conceived legislation as the Cancer Act of 1971 (which in effect declared war on cancer) was passed largely as a result of political considerations in the mistaken belief that a technological society that could land a man on the moon by 1970 could cure cancer with the proper dose of mega-grants. Any actual benefits have yet to be realized from this joint political-scientific venture. One reason for the misdirection of funding in the past has been the lack of a strong federal medical advisory voice with input to the executive and legislative branches. It is widely felt in Washington that in the previous Administration, medical input to the Department of HEW was often not heeded. As a result there have been grave cuts in the funding of some medical endeavors and excessive spending in others. The overriding philosophy has been that of "applied disease solving," instead of balancing the fundamental scientific concerns with basic cellular mechanisms against the more practical social concern with the delivery and application of newly-formed knowledge. This "applied problem solving" approach dictated by the political influences on funding has further contributed to the crisis in medicine.

In short, should we accept that we are going to live in an increasingly technological age, we must decide how we can best tailor our medical education to provide for the health care needs of tomorrow, if this is our primary aim. It might be worthwhile at this point to discuss briefly several theoretical models of technological systems before outlining which modes of education might best serve them.

José Ortéga y Gasset has divided the evolution of technology into three eras: the technology of

(Continued on next page)

"LAW OF DIMINISHING RETURNS:"



chance discovery, the technology of the craftsman, and the technology of the technician. The first is the technology of primitive man, in which inventions such as that of fire are accidents rather than the results of premeditated and deliberate search. In contrast, the technology of the artisan is learned through apprenticeships and handed down by long tradition. Two steps are implied in this kind of technology: the invention of a plan of activity and the execution of this plan. The artisan, as typified by the medieval craftsman, is both the technician and the worker. It is the dissociation of the artisan into these two components which is the hallmark of the third era, the technology of the technicians. In this era of the transition from tools to machines, the technician has grown to be the living expression of technology, the engineer, while the worker has become the technician. While such analogies present inherent problems, it might be of heuristic value to examine the role of the physician in its evolution away from something resembling the artisan of the second era.

We are all accustomed to euphemistic phrases such as "the art of medicine" and "the craft of the surgeon," which seek to connect the role of the artisan with the science of medicine. Howard Spiro has written perceptively on this theme and suggests that medicine is on the verge of its own "Industrial Revolution." What was once the "cottage industry" of the practitioner has now been transformed by sophisticated machines, tests, and health care systems into an industrial complex with recent estimates of operating cost ranging as high as \$80,000,000,000. He suggests that we cling to our stethoscopes, which could easily be replaced by midget circuitry phonocardiograms, as symbols of the special qualities and power of the physician.

If we accept that society will become increasingly stratified by its technology, then its health care needs and its methods of production and delivery may also be radically altered. New models for medical education will be required. The component elements of traditional physician responsibilities, the development, production, and delivery of medical care, will be efficiently allotted to that vast army which will comprise the Health Care Team. This parallels the necessary dissociation of the artisan into several component parts. Physicians will be joined by the basic medical researchers, teachers, practitioners, health delivery planners, legislators, social workers, nurses, phy-

sician's assistants, paramedical aides, and other developing specialty groups to provide the services that were once the sole province of the physician.

If we accept this division of responsibility as an inevitability of health technology, it becomes clear that our medical educational process must be changed. Although it might seem that the most appropriate response to this situation is an equally technological or scientific medical and pre-medical education, I would disagree. Alvin Toffler has written that "in the technological systems of tomorrow, fast, fluid and self regulative machines will deal with the flow of physical materials; men with the flow of information and insight. It will require men who can make critical judgments, who can weave their way through novel environments, who are quick to spot new relationships in the rapidly changing reality." He further argues that "it makes eminent good sense to hedge our educational bets . . . educational diversity increases the odds for survival."

Is not the wisest course a diverse and non-technical education, broadly grounded in the humanities as well as the sciences, an education responsible for the development of critical faculties and understanding? Such an educational system would succeed in training the philosopher-scientists Durkheim envisioned, able to interpret as well as observe data and to function as effective members of a social system.

Although this view may border on heresy in this era of the "doctor shortage," I predict that

(Concluded on page 237)



Dr. Alfred Senft

Case Records Of The Brown University Medical School

Yearly Clinicoscatological Exercises

Arthur Horwich and Pardon Kenney, *co-editors*

PRESENTATION OF CASE

A 24-year-old medical student was admitted to the hospital with logorrhea. He had been found wandering about the East Side babbling neuro-pathological trivia.

The patient had been well until seven years earlier, when he entered the Brown Program in Medicine. Fatigue was noted initially, related to all-night study of Bacchus with local barmaids. Classroom narcolepsy soon followed, and a local university health service prescribed vitamin E and abstinence of all sorts.

He was seen again at the time of anatomy finals, but a complaint could not be elicited, as he instead recited the course and relations of the median nerve. He was treated acutely with intravenous vitamin E, and returned to his books. On admission he was logorrheic, and was noted to drool and issue guttural noises at shapely females in white uniforms.

The temperature was 20°C, the pulse 37, and the respirations 5. On examination slight alopecia and pronounced suborbital tissue swellings were noted. There was increased resonance to cranial percussion. Positive bifrontal transillumination, known as the "light bulb sign," was obtained. Gaze was divergent except in the presence of the shapely uniformed females. He responded to all questions with the differential diagnosis of dyspareunia. Serum IQ factor (SIQF) was 2 IU (idiot units, $n = 14,000$). A 24-hour urine for anxiety cofactor was 76 Bedwetting Units (n less than 5). Brain biopsy on the 279th hospital day was positive for Jell-O.

DIFFERENTIAL DIAGNOSIS

DR. G. ICANGETIT: (visiting Chief Medicine Man, Mashup Island, 156°E, 45°S): The diagnosis

here is obvious, but several questions remain. First, is the Brown Program in Medicine a medical school? I am very much confused by the name. Second, won't chronic vitamin E therapy decrease the SIQF? Linus Apauling recently reported such a decrease in *JE* (Journal of Encephalomalacia).

The symptom complex here is classic, including fatigue, classroom narcolepsy, alopecia, suborbital tissue swellings (known as "bags"), and logorrhea. The treatment here is obvious, and includes immediate conferral of M.D., followed by a month of q 4 hour alcohol therapy. As regards vitamin E, it is a useful supplement, but we at the Island prefer Regimen S, wherein 16,000 natives perform the Mashup fertility dance on the patient's chest. If this fails, I send my favorite spouse to render therapy.

CLINICAL DIAGNOSIS

?

DR. G. ICANGETIT'S DIAGNOSIS

Obvious

PATHOLOGICAL DISCUSSION

DR. G. ICUTITUP: Obtaining adequate material on biopsy was difficult, in light of the positive transillumination. However, the specimen is unquestionably Jell-O, as you can see. Microscopic studies proved fruitless, but the taste-test revealed strawberry flavor. This is diagnostic for the disease described above, and is associated with long unbacchanalian nights on-call, but much personal gratification in years to come.

ANATOMICAL DIAGNOSIS

Obvious



Editorial

BMS '75

The Medical Department of Brown University which began its career with high hopes in 1811, at a time when only two other medical schools existed in New England (Harvard and Dartmouth), came to an abrupt end in 1827. Its new and youthful President, The Reverend Francis Wayland, Jr., had a vision compounded of Puritanism and Abraham Flexner. In December of 1827 The Corporation, at Wayland's urging, adopted a regulation requiring "that all of its officers be actual residents within the walls of the Colleges" in order "assiduously" to elevate themselves "to the preservation of order and the instruction of the students or the performance of such other duty as may belong to this station." Although there is good evidence that Wayland hoped the school might continue, this action effectively put it out of business. There was no way that the general practitioners who were the school's teachers could give up their practices in the community and survive.

In 1826, the last year in which M.D. degrees were awarded, there were five graduates-in-course, while a few others received degrees belatedly. One member of the class was the distinguished Elisha Bartlett.

Although Usher Parsons, a professor of Surgery and Anatomy in the old school, wrote in 1859 that "the proximity of medical schools in Boston, New Haven, and Pittsfield" would "always prevent the growth and success of one in Rhode Island," hopes for a revival lingered on. Professor William Gaummell, at the opening of Rhode Island Hospital in 1868, expressed the hope that there might yet be a medical school "associated with our university, as there used to be some forty years ago." In 1879 Doctor Charles Parsons, son of Usher, wrote: "whether this city, the second in New England, shall become the seat of such a school must depend very much on the zeal, persistence, and ability of its physicians." He believed that the liberal spirit of the University gave "assurance that it would welcome the addition of a medical school to its other departments, if the community and the pro-

fession should be ready to demand it." Finally, in an address before the Rhode Island Medical Society in 1899, William Osler expounded this view:

"The existing conditions in Providence are singularly favorable for a small first-class school. Here are college laboratories of physics, chemistry, and biology, and modern hospitals with three hundred beds. What is lacking? Neither zeal, persistence nor ability on the part of the physicians (obviously quoting from Professor Parsons' comments of twenty years before), but a general donation to the University of a million dollars with which to equip and endow laboratories of anatomy, physiology, pathology and hygiene. These alone are lacking; the money should be the least difficult thing to get in this plutocratic town. The day has come for small medical schools in university towns with good clinical facilities."

Another three-quarters of a century would pass before this hope would be realized.

We are now able to welcome into our midst the first graduates in medicine from Brown University in almost 150 years. We are proud and delighted through the medium of this special issue of the RHODE ISLAND MEDICAL JOURNAL to congratulate the Brown University Program in Medicine on its full accreditation and the graduation of its charter class, and to congratulate these new physicians upon their entrance into the profession. It is particularly appropriate to shine the spotlight on them in this way since close to half of them have chosen to remain in Rhode Island for their postgraduate training. We welcome them as future colleagues in our community. It is a token of our great interest in them and further demonstrates the new historical partnership in Rhode Island between the practicing physicians of the community and formal medical education.

May the new physicians of the class of '75 of BMS be the first of a host. May they prosper and their numbers multiply.



The **ALLBEE® with C** Scrapbook of Vitamin Facts & Fallacies



The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.

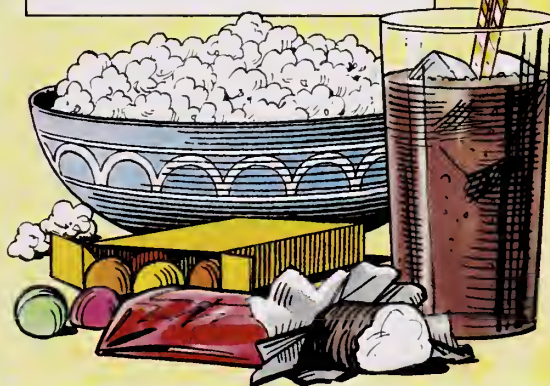


De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food." The disease he described was probably scurvy.



The outer leaves of cabbage and brussels sprouts contain more vitamin C than the heads. Yet, ironically, these are often trimmed away by the grocer to improve appearance and enhance sales appeal! Many housewives trim them even more before cooking!

A 1965 U.S.D.A. survey revealed that American diets were lower in vitamin C than they had been 10 years earlier!



Available on your
prescription or
recommendation

ALLBEE® with C

High Potency
B-Complex and
Vitamin C
Formula



A.H. Robins Company, Richmond, Va. 23220 **A.H. ROBINS**



Spasm reactor?

Donnatal!

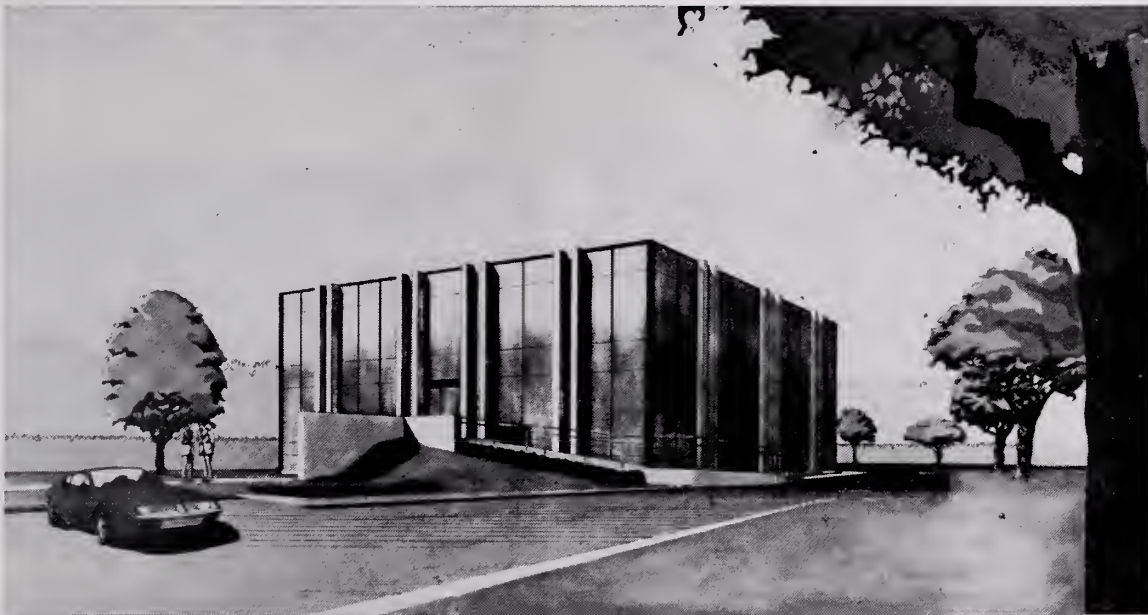
	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg	0.0582 mg.
hyoscine hydrobromide	0.0065 mg	0.0065 mg	0.0195 mg.
phenobarbital	($\frac{1}{4}$ gr.) 16.2 mg	($\frac{1}{2}$ gr.) 32.4 mg	($\frac{3}{4}$ gr.) 48.6 mg
(warning: may be habit forming)			

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy) or hypersensitivity to any of the ingredients.

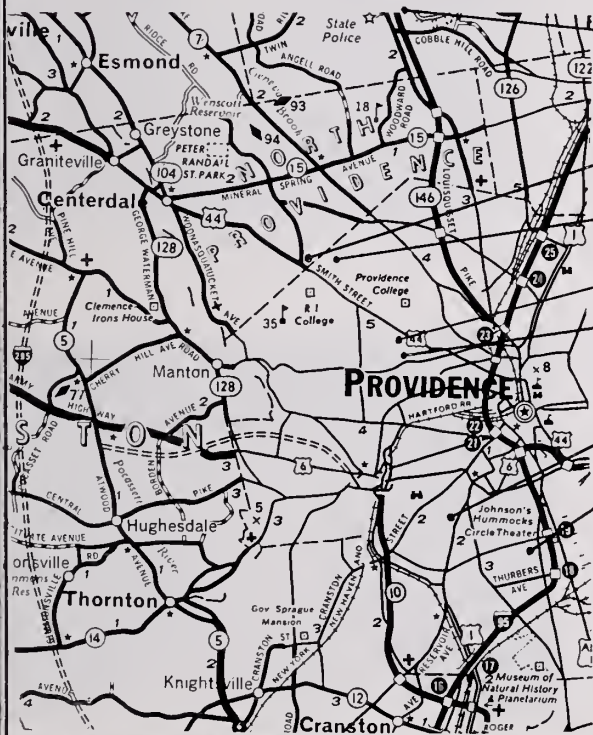
A-H-ROBINS A H Robins Company, Richmond, Virginia 23220

MEDICAL OFFICE BUILDING – SUITES AVAILABLE

- METROPOLITAN AREA
- ELEVATOR — WHEEL RAMP
- AIR COOLED VENTILATED HEAT CYCLE
- X-RAY DEPT.-LAB-ALL CONVENIENCES
- REASONABLE
- LAVISH CONTEMPORARY DESIGN
- PARKING
- DIRECT BUS LINE



WELLESLEY OFFICE BUILDING
1515 SMITH ST., NO. PROV., R.I.
MANCINO ASSOCIATES ARCHITECTS



FOGARTY HOSPITAL

Wellesley Med. Bldg.

FATIMA HOSPITAL

LYING-IN HOSPITAL

**ROGER WILLIAMS
GENERAL HOSPITAL**

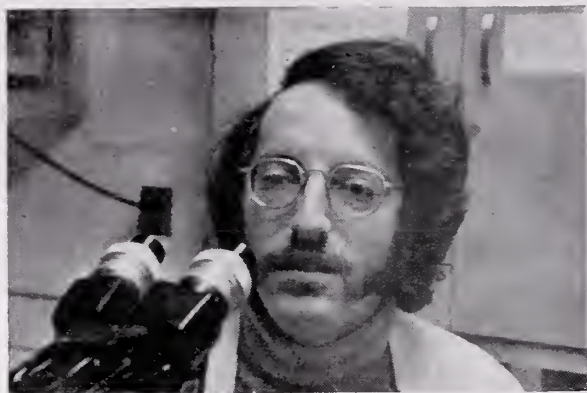
ST. JOSEPH'S HOSPITAL

RHODE ISLAND HOSPITAL

INQUIRIES

contact

353-1110

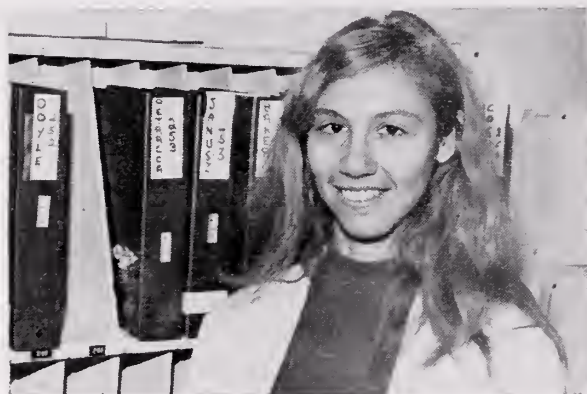


DAVID SNYDER hails from Pawtucket, R.I., and graduated from Brown in 1971 with honors in Biomedical sciences. He attended the University of Southern California School of Medicine from 1971 to 1972, then returned to finish medical school at Brown. He spent three summers in research at the Marine Biological Laboratory at Woods Hole, Massachusetts. He also served as Captain of the Brown Varsity Sailing Team and commodore of the Brown Yacht Club. His wife, Marsha, is from Los Angeles and Palm Springs, California. Following an internship in medicine, Dave plans a residency in ophthalmology at the University of Illinois, Chicago.

Flexible Internal Medicine, Los Angeles County-University of Southern California Medical Center, Los Angeles, Calif.

MICHAEL GRAHAM comes from Fairlawn, New Jersey and graduated from Columbia University, New York City, in 1971. Before coming to Brown he earned the M.M.S. degree from Rutgers Medical School in 1973. He plans a career in the field of pediatrics. Mike is a jazz pianist, and has many other outside interests.

Pediatrics, Johns Hopkins Hospital, Baltimore, Md.



GOLDE DUDELL was born in Munich, Germany, and calls Vineland, New Jersey her home town. She entered Brown from high school in 1968 in the M.M.S. program. She is particularly interested in the field of immunology and infectious diseases.

Pediatrics, Roosevelt Hospital, New York, N.Y.

PETER FEINSTEIN is from Woodmere, Long Island, New York. He earned his B.A. from Brown in 1972 and his M.M.S. in 1974. He was a member of Phi Kappa Psi Fraternity and of Sigma Xi. He was also involved in Brown Varsity Letter Wrestling as an undergraduate. He is planning to be a surgeon, sub-specialty unknown.

Surgery Categorical*, Montelore Hospital Center, New York, N.Y.



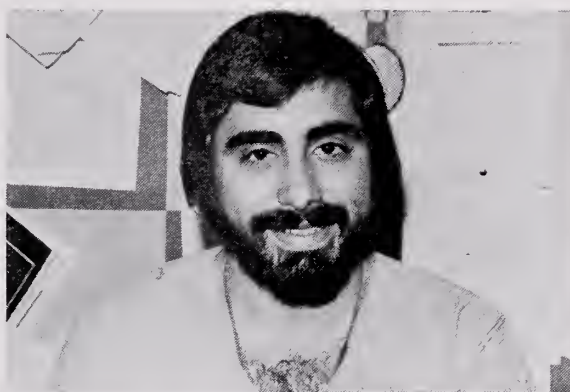


THOMAS LOGAN was born in New Castle, Pennsylvania, and raised in Miami, Florida. He entered Brown in 1967, and following graduation continued in the Brown Program in Medicine. His family includes his wife Judith and five-month-old son Jeremy. He is currently in an Internal Medicine sub-internship at The Miriam Hospital and plans to settle in the Rhode Island area.

Surgery, Rhode Island Hospital, Providence, R.I.

WILLIAM GEORGIS was raised in Oak Park, Illinois. He is planning to enter the field of Plastic and Reconstructive Surgery, and is interested in film history. "I think it is better to be beautiful than to be good, but . . . no one is more ready than I am to acknowledge that it is better to be good than to be ugly."—Oscar Wilde.

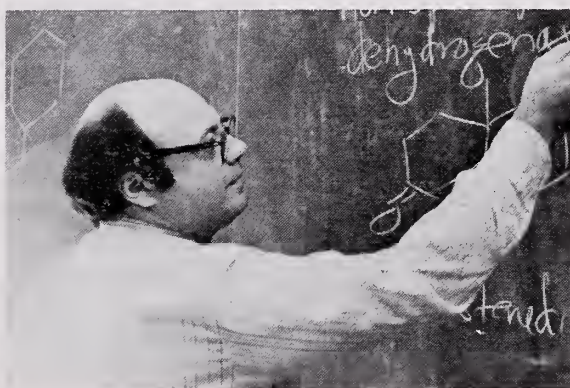
Surgery Categorical,* Presbyterian-St. Luke's Medical Center, Chicago, Illinois.



FAIZA FAWAZ ESTRUP was born in Lebanon and is a naturalized U.S. citizen living with her husband Peder, a professor at Brown. She holds a Ph.D. in biophysics from Yale University, has done research in molecular biology and biophysics at the Massachusetts General Hospital, was a postdoctoral research fellow at the University of Geneva, worked as a research biophysicist at the Bell Telephone Labs, and was a senior research associate at Haverford College and at Brown. She is a member of Sigma Pi Sigma and Sigma Xi societies, the Biophysical Society, and the A.A.A.S. Her plans for the future are to combine the practice of medicine with teaching and research. Internal Medicine, Rhode Island Hospital, Providence, R.I.

HORACE MARTIN not only has lived in Pawtucket, R.I. for the last thirty years, but has received all of his medical training within the confines of the borders of this state. He earned his B.S. from Providence College, his M.S. from the University of Rhode Island, and his M.D. from Brown. He plans to do a residency in Clinical Pathology at the Rhode Island Hospital.

Clinical Pathology, Rhode Island Hospital, Providence, R.I.





A native of West Hartford, Connecticut, PETER LEWITT entered the Brown Medical Science program in 1968, receiving a B.A. in 1972 and the M.M.S. in 1975. His research interests include folate metabolism and chemotherapy, and career interests are in internal medicine, destination unknown. While at Brown, his activities included the Faunce House Board of Governors, Resident Fellow Program, and the Medical Curriculum Committee.

Internal Medicine, Philadelphia General Hospital, Philadelphia, Pa.

GLENN MITCHELL was born in Guilford, Connecticut, and first came to Brown in 1963. After earning degrees in engineering and physics and spending three years in teaching and research, he returned to Rhode Island permanently. His interests are the brain, surgery, and Valerie. "From the brain, and from the brain only, arise our pleasures, joys, laughter, and jests, as well as our sorrows, pains, griefs, and tears." — Hippocrates.

Surgery, Rhode Island Hospital, Providence, R.I.



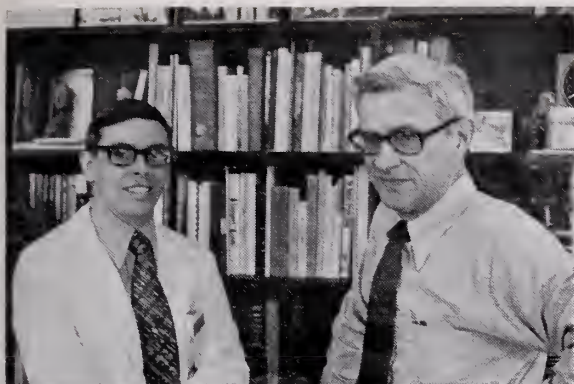
VALERIE PARISI MITCHELL lived in Brooklyn, New York until 1968 when she came to Brown. Now, with a career in Obstetrics and Gynecology, she is going to remain a Rhode Islander. "The history of man for the nine months preceding birth would, probably, be far more interesting and contain events of greater moment than all the three score and ten that follow." — Coleridge.

Surgery, Rhode Island Hospital, Providence, R.I.

ROBERT CASTELLAN came from a lifetime hometown of Media, Pennsylvania to enter Brown's M.M.S. program in 1968. He plans to complete a residency in Internal Medicine in the Northeast corner of the U.S., where he and his wife Susan want to settle, "...comfort always."

Internal Medicine, Rochester General Hospital, Rochester, N.Y.





EDWIN ZALNERAITIS comes from Boylston, Massachusetts and earned his B.A. in biology from The College of the Holy Cross in 1970. While at Brown, his research, under the guidance of Dr. Stanley Aronson, led him to plan a career in pediatric neurology with special training in neuromuscular disease. "The grand essentials to happiness in this life are something to do, something to love, and something to hope for." — Joseph Addison.

Pediatrics, The Children's Hospital Medical Center, Boston, Mass.

MARCIA LEONARD, from Westport, Connecticut, entered Brown a freshman in the M.M.S. program. As a student she explored health care delivery in hospital emergency rooms, and did research involving physiological applications of computer models. She received her M.M.S. in 1974, with a thesis entitled "A Fortran Model of Human Acid Base Balance Regulatory Mechanisms." She is planning a future in pediatrics.

Pediatrics, University of Connecticut Affiliated Hospitals, Hartford, Conn.



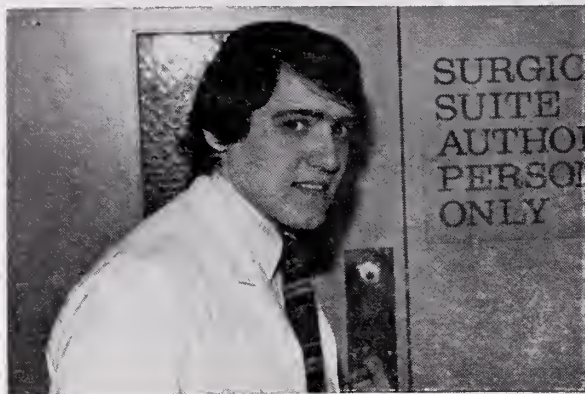
JONATHAN GELL was born in New York City, but calls Lake Oswego, Oregon and Highland Park, Illinois his home towns. He plans to enter a private practice in internal medicine and rheumatology. His special interests include research in nucleotide metabolism and high pressure liquid chromatography, fishing, science fiction, metaphysics, and moral philosophy. "I ought, therefore I can." — Immanuel Kant.

Internal Medicine, Boston University Hospitals. Boston, Mass.

CHRISTOPHER MORIN, from Boston, Massachusetts, came to Brown after graduating from The College of the Holy Cross in 1970. While a medical student, he served as an advisor for the designing, building, and equipping of a rescue truck for the city of North Providence, where he lives with his wife, Kathleen, and daughter, Colleen. He also served on the Brown University Committee for Emergency Coronary Care. His plans include a surgical residency and a career in either general surgery or pediatric surgery.

Surgery, Massachusetts General Hospital, Boston, Mass.



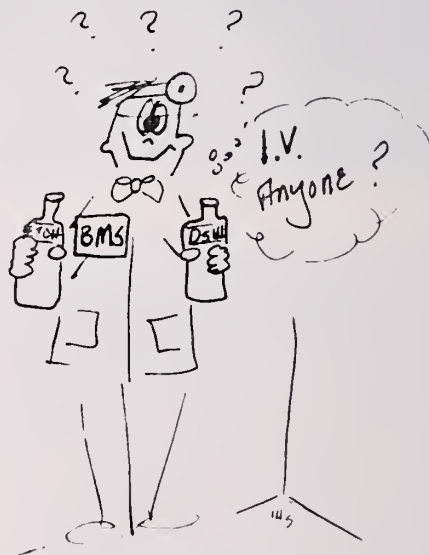


ANTHONY CALDAMONE and his wife Barbara are homespun products of Providence. After attending LaSalle Academy, Tony entered the Brown Medical Program. Sailing, squash, and tennis take up most of his spare time. He has earned the M.M.S. degree with research work on the autonomic renal innervation. He has been a class representative to the Medical Student Council for the past three years and has served on numerous committees, including the M.D. Curriculum Committee. After training he plans to blend a practice of pediatric surgery and academics in New England. "No one is allowed to put his mother into the stove because he desires to know how long an adult woman will survive at a temperature of 500F, no matter how important or interesting that particular addition to the store of human knowledge may be."—G. B. Shaw.

Surgery, Strong Memorial Hospital, Rochester, N.Y.

JAMES LYNCH is from New Canaan, Connecticut, and came to Brown in 1967. He is interested in many sports, and has served as President of the Medical Student Council. He enjoys the guitar and often accompanies Mass at Manning Chapel on the Brown campus. Jim has done research work in surgery and plans to enter pediatric surgery following a general surgical residency.

Surgery, Rhode Island Hospital, Providence, R.I.



ON THE FUTURE OF MEDICAL EDUCATION

(Concluded from page 227)

it will be necessary for a greater number of physicians to depart from traditional medical roles if they intend to continue to oversee and to coordinate the entirety of health care in the United States. Physicians will enter government and industry to be responsible for health care legislation, research priorities, and funding; writing and journalism to keep the public informed; the social sciences to develop new delivery systems; and education in its more general aspects, to determine the direction medical and the collective pre-medical and post-graduate programs will take in response to the above concerns. Clearly these physicians would not be leaving medicine after graduation, as feared, but only joining the ranks of a greatly expanded, non-traditional medical care system providing maximum flexibility and responsiveness.

In conclusion, it appears that medical science will soon be demarcated into the engineering, production, and distribution or delivery functions. Medical education must be restructured to provide adequate preparation for individuals entering all aspects of this system. I believe that the specialized education and preparation which is currently prevalent must give way to a diversity and variety which will provide training that is more appropriate and successful, both for the physician and for society.

REFERENCES

- ¹Durkheim, Emile: *Sociology and Philosophy*. N. Y.: The Free Press, 1974.
- ²Edwards, Charles C.: "The Federal Involvement in Health: Current Problems and Future Needs." *The New England Journal of Medicine*, 292(11) 559-562 (1975).
- ³Ort ga y Gasset, Jos : *History as a System*. N.Y.: The Norton Library, 1972.
- ⁴Leuchtenberg, William E.: *A Troubled Feast; American Society Since 1945*. Boston: Little, Brown and Co., 1973.
- ⁵Spiro, Howard M.: "Visceral Viewpoints: My Kingdom for a Camera": *The New England Journal of Medicine*, 291(20) 1070-1072 (1974).
- ⁶Stimmel, Barry: "The 'Crisis' in Medical Education." *Annals of Internal Medicine*, 79:119-123 (1973).
- ⁷Thomas, Lewis: *The Lives of a Cell*. N.Y.: The Viking Press, 1974.
- ⁸Toffler, Alvin: *Future Shock*. N.Y.: Bantam Books, 1970.



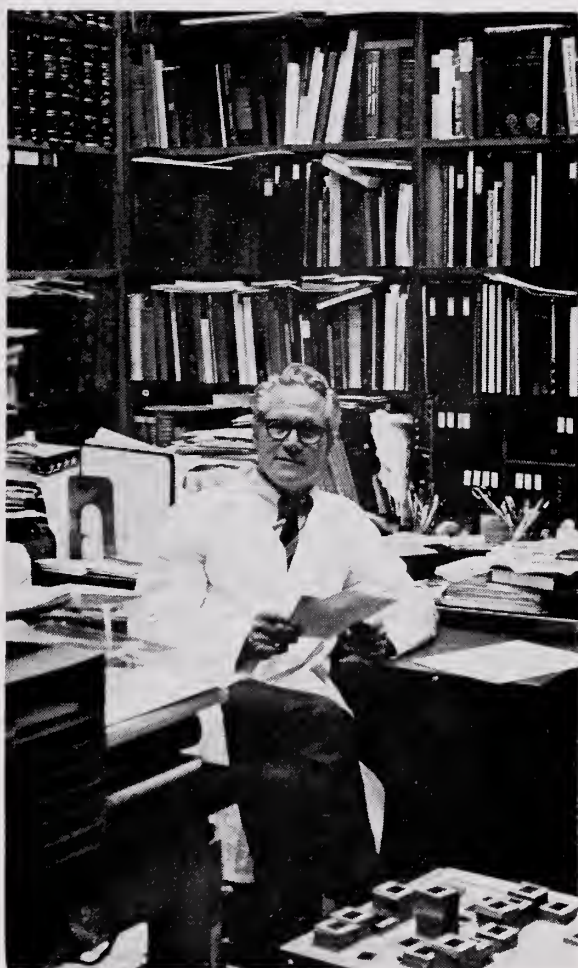
ONE SENTENCE ESSAY

The lack of money is the root of all evil.

... Anon.



Mr. Levi Adams



Dr. George (Erik) Erikson

Postgraduate Training Plans: Class Of 1975

ARAM ARABIAN — Internal Medicine, location undecided

CHARLES BAREHAM — Flexible Medical Internship, Portsmouth Naval Hospital, Portsmouth, Va.

GEOFFREY BERG — Internal Medicine, Roger Williams General Hospital, Providence, R. I.

MARK BLUMENKRANZ — Surgery, Stanford University Hospital, Palo Alto, CA.

STUART BOE — Internal Medicine, Rhode Island Hospital, Providence, RI

ANTHONY CALDAMONE — Surgery, Strong Memorial Hospital, Rochester, NY

ROBERT CASTELLAN — Internal Medicine, Rochester General Hospital, Rochester, NY

REID COLEMAN — Internal Medicine, The Miriam Hospital, Providence, RI

EDWARD COLLINS — Pediatrics, Rhode Island Hospital, Providence, RI

ELIZABETH CORRIGAN — Internal Medicine, Rhode Island Hospital, Providence, RI

BRENT DAVIS — Internal Medicine, Roger Williams General Hospital, Providence, RI

DONALD DEROLF — Family Practice, Pawtucket Memorial Hospital, Pawtucket, RI

JOSEPH DiLORENZO — Internal Medicine, Roger Williams General Hospital, Providence, RI

CHARLES DOOLITTLE — Internal Medicine, Roger Williams General Hospital, Providence, RI

GOLDE DUDELL — Pediatrics, Roosevelt Hospital, New York, NY

DEAN EFFLER — Pediatrics, Rhode Island Hospital, Providence, RI



Dr. Fred Barnes

JONATHAN ELION — Internal Medicine Categorical*, University Hospitals, Madison, WI

FAIZA ESTRUP — Internal Medicine, Rhode Island Hospital, Providence, RI

PETER FEINSTEIN — Surgery Categorical*, Montefiore Hospital Center, New York, NY

JONATHAN GELL — Internal Medicine, Boston University Hospitals, Boston, MA

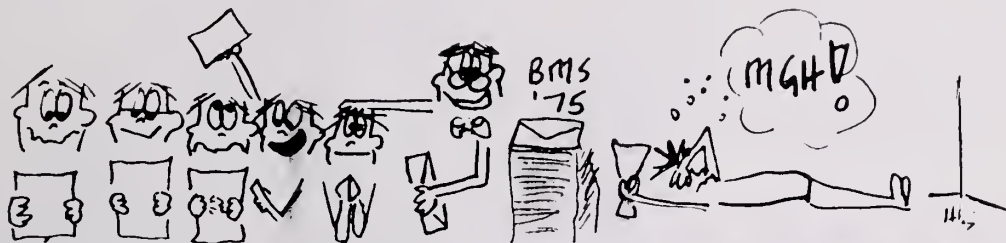
WILLIAM GEORGIS — Surgery Categorical*, Presbyterian-St. Luke's Medical Center, Chicago, IL

MICHAEL GRAHAM — Pediatrics, Johns Hopkins Hospital, Baltimore, MD

WILLIAM GRAHAM — Internal Medicine, Rhode Island Hospital, Providence, RI



In Rhode Island... A day to remember
 "MATCH 5th"



ALAN GREENGLASS—Internal Medicine, Washington Hospital Center, Washington, DC

RICHARD HARBISON — Pediatrics. David Grant Medical Center (Travis AFB), Fairfield, CA

JEFFREY HERGENRATHER — Flexible Internal Medicine, Medical College of South Carolina Hospitals, Spartanburg, SC

LOUIS HOGREFE — Family Practice, Sioux Falls Family Practice Program, Sioux Falls, SD

JOHN HORNEFF — Pathology, University of Chicago Hospital and Clinics, Chicago, IL

ARTHUR HORWICH — Pediatrics, Yale-New Haven Medical Center, New Haven, CT

JANE JOINER — Internal Medicine, St. Elizabeth's Hospital, Boston, MA

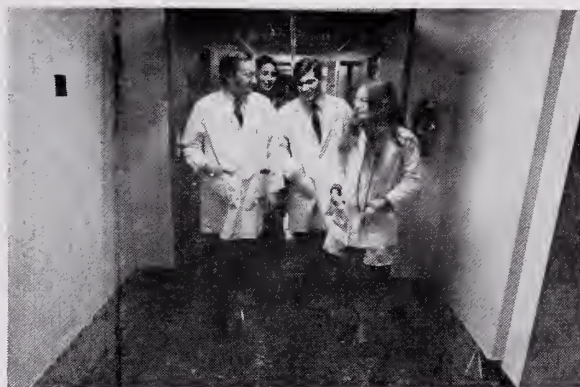
PARDON KENNEY—Surgery, Rhode Island Hospital, Providence, RI

CHARLES KESSLER — Internal Medicine, Presbyterian-St. Luke's Medical Center, Chicago, IL

PETER LeWITT — Internal Medicine, Philadelphia General Hospital, Philadelphia, PA

MARCIA LEONARD — Pediatrics, University of Connecticut Affiliated Hospitals, Hartford, CT

NORMA LERNER — Pediatrics, Boston City Hospital, Boston, MA



Glenn Mitchell, Valerie Mitchell, Donald Nenno, and Jane Joiner

TOM LOGAN — Surgery, Rhode Island Hospital, Providence, RI

JAMES LYNCH — Surgery, Rhode Island Hospital, Providence, RI

HORACE MARTIN — Clinical Pathology, Rhode Island Hospital, Providence, RI

ROBERT MEYER — Internal Medicine, The Miriam Hospital, Providence, RI

MARY LYNN MILLER — Internal Medicine, Roger Williams General Hospital, Providence, RI

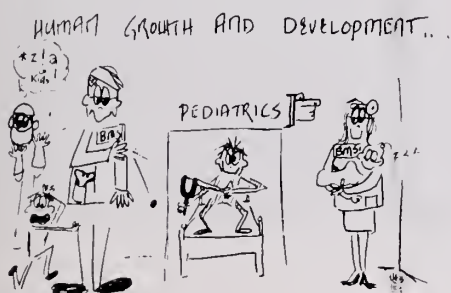
GLENN MITCHELL — Surgery, Rhode Island Hospital, Providence, RI

VALERIE MITCHELL — Surgery, Rhode Island Hospital, Providence, RI

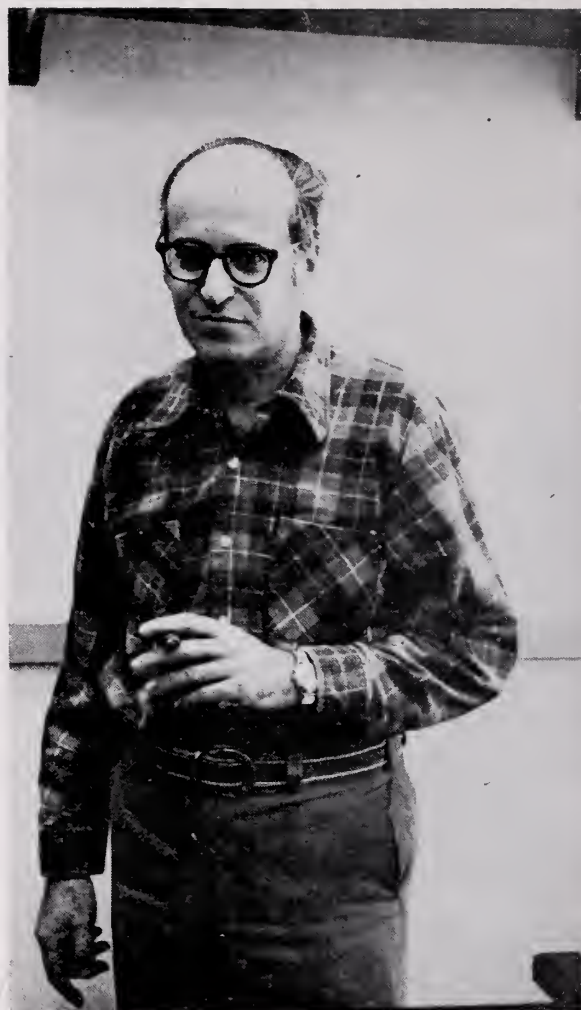
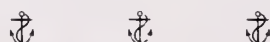
CHRISTOPHER MORIN — Surgery, Massachusetts General Hospital, Boston, MA

PATRICIA MYSKOWSKI — Internal Medicine, Rochester General Hospital, Rochester, NY

DONALD NENNO — Surgical Categorical*, Rhode Island Hospital, Providence, RI



PAUL von OEYEN — Obstetrics-Gynecology,
The New York Hospital, New York, NY
KATHLEEN OHARA — Pediatrics, Los Angeles
County-University of Southern California Medi-
cal Center, Los Angeles, CA
MARK ROSEN — Internal Medicine, Mount Si-
nai Hospital, New York, NY
LEON ROSENBERG — Internal Medicine, Vir-
ginia Commonwealth University Hospitals, Rich-
mond, VA
BONNIE SAKS — Internal Medicine, Montefiore
Hospital Center, New York, NY
MAURA SANTANGELO — Internal Medicine,
Roger Williams General Hospital, Providence,
RI
MICHAEL SHAFER — Internal Medicine, Mi-
riam Hospital, Providence, RI
DANIEL SMALL — Internal Medicine, Roger
Williams General Hospital, Providence, RI
DAVID SNYDER — Flexible Internal Medicine,
Los Angeles County-University of Southern Cal-
ifornia Medical Center, Los Angeles, CA
ROBERT STARZAK — Pediatrics, Los Angeles
County-University of Southern California Medi-
cal Center, Los Angeles, CA
MARILYN STEARNS — Pediatrics, Rhode Is-
land Hospital, Providence, RI
ALEXANDER SWISTEL — Surgery, St. Luke's
Hospital, New York, NY
EDWIN ZALNERAITIS — Pediatrics, The Chil-
dren's Hospital Medical Center, Boston, MA



Dr. Boris Rotman



Dr. Nelson Fausto

Disruptive anxiety usually meets its match here.

Often effective when reassurance and counseling are insufficient.
Three dosage strengths to meet most therapeutic needs.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug, and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions:

ORAL: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six.

INJECTABLE: Keep patients under observation, preferably in bed, up to three hours after intramuscular injection; forbid ambulatory patients to operate vehicle following injection; do not administer to patients in shock or comatose states; use reduced dosage (usually 25 to 50 mg) for the elderly or debilitated and for children age twelve or older.

ORAL AND INJECTABLE: Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating compounds such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual



precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduc-

tion; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. **Oral: Adults:** Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. **Geriatric patients:** 5 mg b.i.d. to q.i.d. (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

Supplied:

Oral: Librium® (chlordiazepoxide HCl) Capsules—5 mg, 10 mg, 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50, available singly and in trays of 10.

Libritabs® (chlordiazepoxide) Tablets—5 mg, 10 mg and 25 mg—bottles of 100 and 500.

Injectable: Librium® (chlordiazepoxide HCl) Ampuls—Duplex package consisting of a 5-ml dry-filled ampul containing 100 mg chlordiazepoxide HCl in dry crystalline form, and a 2-ml ampul of Special Intramuscular Diluent (for I.M. administration). Before preparing solution for I.M. or I.V. administration, please consult package insert for instructions on preparation and administration of solutions. Boxes of 10.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Librium® (chlordiazepoxide HCl)

5 mg, 10 mg, 25 mg capsules

please see following page.

Disruptive anxiety usually meets its match here.

ROCHE

Librium
(chlordiazepoxide HCl)

5 mg, 10 mg,
25 mg capsules

LIBRIUM
5 ROCHE

LIBRIUM
5 ROCHE

LIBRARY

APR 23 1976

LIBRIUM
25 ROCHE

LIBRIUM
25 ROCHE

LIBRIUM
10 ROCHE

LIBRIUM
10 ROCHE

Please see preceding page for summary of product information.

June 1975

R.I. Medical Journal

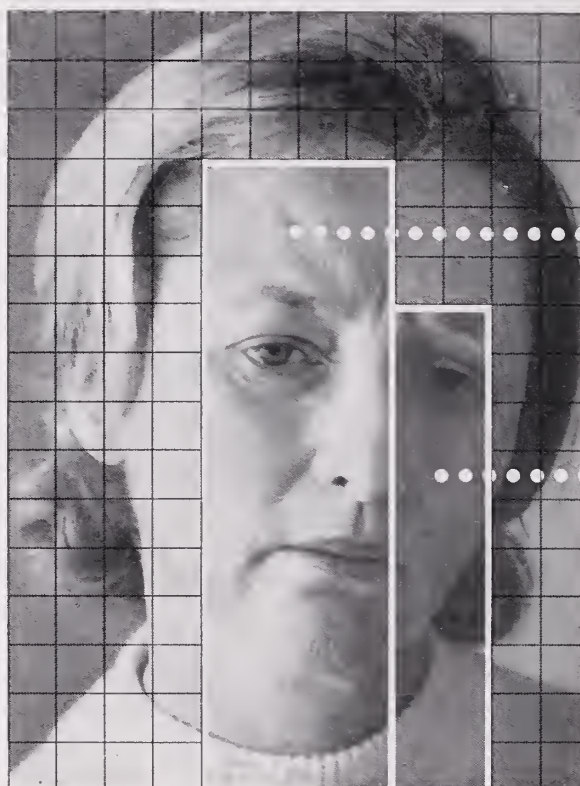
Vol. 58 No. 6

BALCONT



ENDOMETRIAL CANCER

Both often



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizure may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Use with caution in addiction-prone individuals under careful

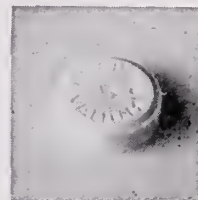
respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam) 2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, sedatives, barbiturates, MAO inhibitors and other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

JUNE, 1975

VOLUME 58, No. 6

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.



John F.W. Gilman, M.D., Chairman	*Charles A. Hall, Jr., M.D.
*John A. Dillon, M.D., Acting Chairman	Robert V. Lewis, M.D.
*Stanley M. Aronson, M.D.	*Peter L. Mathieu, M.D.
*Bertram H. Buxton, Jr., M.D.	*Jay M. Orson, M.D.
Robert P. Davis, M.D.	Henry T. Randall, M.D.
*Herbert Fanger, M.D.	*Guy A. Settignano
Pierre M. Galletti, M.D., Ph.D.	

(*Also Member Publications Committee)

TABLE OF CONTENTS

DR. GEORGE W. WATERMAN CANCER DIALOGUE: INTRODUCTORY REMARKS	
Arvin S. Glicksman, M.D.	257
CANCER OF THE ENDOMETRIUM	
Hugh R. K. Barber, M.D., Edward A. Graber, M.D., Sheldon C. Sommers, M.D., Barry Reisman, M.D. and Tae Hae Kwon, M.D.	259
RADIATION TREATMENT OF CARCINOMA OF THE ENDOMETRIUM	
Gilbert Fletcher, M.D.	267
MEDICAL MANAGEMENT OF CARCINOMA OF THE ENDOMETRIUM	
Rita M. Kelley, M.D.	271
IMPLICATIONS OF DRUG REACTIONS — RECOGNITION, INCIDENCE AND PREVENTION	
James W. Cooper, Jr., Ph.D.	274
PRESIDENT'S PAGE	243
EDITORIAL PAGE	231
BOOK REVIEWS	247

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island, Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.

President's Page

"LET COMMON SENSE RETURN TO MALPRACTICE INSURANCE"

There is a serious malpractice insurance crisis in Rhode Island as we are all aware from the events in the past few weeks. Our greatest concern is for our patients and the increased medical costs they must face if the present crisis is not alleviated. Rhode Island has always been a leader in the health care field and again, as in the days of John Fogarty, is rising to meet the challenge of "quality health care at a reasonable cost."

There are two basic problems: firstly, the sharply escalating malpractice insurance premiums and the need for remedial legislation to restrain them; and secondly, the *mandatory* change in these policies from "occurrence" to the "claims-made" concept on the part of one insurance company with the doctor having no alternative choice available.

Taking the short-term immediate "crisis" first, the basic objection to "claims-made" policies is that the physician must purchase a three-year reporting endorsement after they cease to be covered by the insurance company, whether by moving, changing carriers, dying, or retiring. The cost of this terminal premium is *projected* at 159 per cent of the last annual premium. Under the "occurrence" coverage, a physician was automatically covered without any additional premiums. If a doctor should die, under "claims-made" concept his spouse must purchase the three year endorsement within 30 days to be protected from a future claim. This means an expenditure of \$19,500 if the last premium was \$13,000. If a physician moves to another state where "claims-made" is not sold or the insurance company were to leave Rhode Island, the physician would be paying *double premiums* for the next three years. Many physicians find this "claims-made" concept completely unacceptable and would be willing to pay even higher rates to continue on the "occurrence" basis until remedial legislation has been enacted to control these rates and allow competitive selling of policies to re-enter the insurance industry.

Comprehensive remedial legislation is now being considered by the Governor's Task Force on Malpractice and modifications, alterations, or substitutions for the present court-jury system will be investigated in an effort to reduce the cost of litigating professional liability suits and the

incidence of excessive and irresponsible judgments. This legislation must effect changes in the system in the following areas:

1) Reduce the statute of limitations to a realistic figure of 1½ to 2 years and slightly longer in infancy cases.

2) Permit a jury to receive evidence of collateral sources of compensation and structure awards to cover predicted actual expenses of the patient for as long as necessary.

3) Define more precisely the doctrine of "Informed Consent" and abolish "res ipsa loquitur."

4) Modify the contingency fees so that the patient gets more than 16 per cent of the premium dollar.

5) Allow the medical profession to exercise peer review and to discipline its own members to include limiting, suspending or revoking licensure, and to order remedial education where necessary.

6) Eliminate the ad damnum clause and have a maximum limit on monetary awards.

7) Establish arbitration panels to assist negligence claims and screen out frivolous or nuisance claims before large amounts of money are spent on proving them worthless.

Why is it important that the Task Force thoroughly study these and other facets of the problem and recommend remedial legislation at the earliest possible time? So that doctors can think less about "defensive medicine" and more about the patient's illness; so that older physicians will not be forced into early retirement; and so that new doctors can enter this state to practice with the knowledge that reasonable insurance coverage is available to them.

We must find a solution to this malpractice insurance crisis as soon as possible for the good of our citizens and optimal medical care. The cooperation that has been shown by all concerned parties and the leadership exhibited by the executive and legislative branches of our State Government should show Rhode Islanders that we are still leaders in obtaining "quality health care at a reasonable cost."

Let us get back to taking care of sick people!

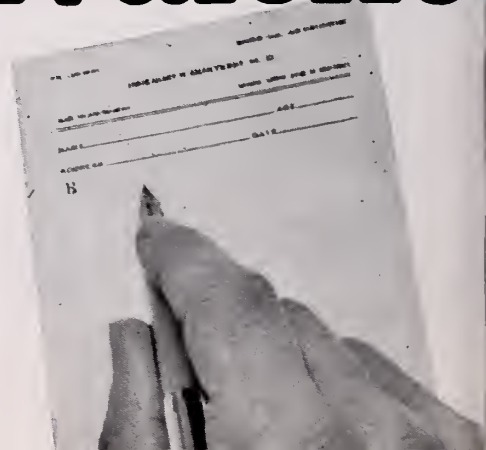
STEPHEN J. HOYE, M.D.

President

Rhode Island Medical Society



Bioequivalence



the weight of scientific opinion:

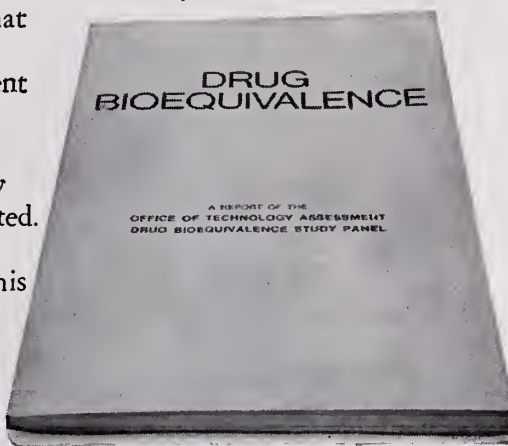
If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioequivalence in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

Help stop the tears

**of colic, diarrhea
or similar malady.**

Use i-Soyalac.

i-Soyalac and regular Soyalac are palatable, readily digestible and assimilated. It simulates human milk in appearance, taste and texture. It is complete with vitamins and minerals. It is suitable for infants and children who are sensitive to or cannot tolerate cow's milk.

For nearly a quarter of a century, Soyalac has proven its value in promoting growth and development — as shown by extensive clinical data.

Available in four forms: i-Soyalac Concentrated, Soyalac Concentrated, Soyalac Ready-to-Serve, and Soyalac Powder.



i-Soyalac from isolated protein without corn.

Send to: Loma Linda Foods
Medical Products Division
Riverside, Calif. 92505

Please send me free sample and literature.

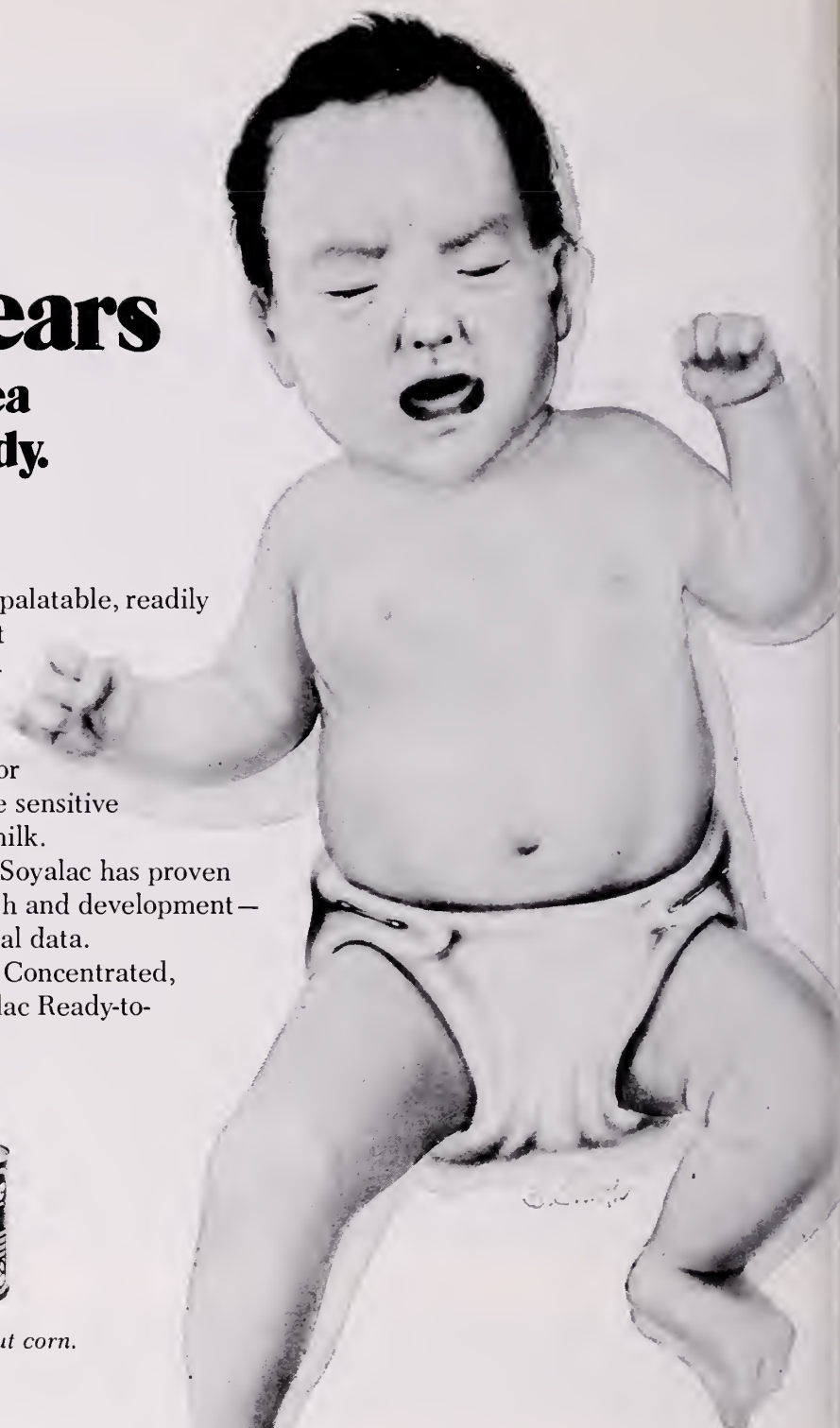
Name _____

Address _____

City _____ State _____ Zip _____

Or a simple note on your prescription form will do.

SJ-6



Book Reviews

THE POISONED PATIENT: The Role of the Laboratory. Ciba Foundation Symposium 26 (new series). Amsterdam, Associated Scientific Publishers, 1974.

An international group of clinicians and laboratory workers with such evocative names as Newton, Beckett, and Sunshine discuss today's sophisticated laboratory techniques, which they evaluate as 107 times better than those of 20 years ago, enabling the measurement of very low tissue levels of drugs.

The detection of drugs in body tissues today is possible through a multiplicity of methods, i.e., luminescence, mass ultraviolet and infra-red spectrometry, gas chromatography, radioisotope assay, the ingenious innovative approach of immunoassay, and, of course, one must not forget the morbid anatomist.

Metabolite levels resulting from the combination of 2 or more drugs may be obtained now which are helping us to understand their effects in illness which may sometimes be iatrogenic in origin. The many interactions of common barbiturates such as in lowering tricyclic levels and enhancing the metabolism of methyldopa are an example. The complexity of these interactions is underlined in a discussion of physostigmine, a general central stimulant, in which it is thought its action as an antidote in the treatment of tricyclic antidepressant overdose may result from its reversal of the anticholinergic effects of the tricyclic drugs.

Of interest to the physician practicing occupational medicine is the frequent requirement by government and some corporations for urine narcotic screening in pre-placement examinations. Screening will also be increasingly necessary in medical surveillance for those employees who must deal with toxic substances in their work.

The indications for what the panel participants term as most often misguided hemodialysis and forced alkaline diuresis are discussed in what they deem to be the few instances of clear reduction of morbidity in poisoned patients. One in a 1,000 such patients in an Edinburgh study were found to have responded positively to these regimens. "The treatment was a success but the patient died."

CIBA continues its production of excellent medical publications with this symposium, which will be

a valuable reference for emergency room and laboratory colleagues.

G. F. Monahan, M.D.
Medical Director
General Electric Co., R.I.

* * *

HANDBOOK OF POISONING: Diagnosis and Treatment by Robert H. Dreisbach. Los Altos, California, Lange Medical Publications, 1974. Eighth Edition. \$6.50

Lucretia Borgia and all but a very few physicians would find this concise little gem of a handbook useful. Sections covered are: emergency diagnosis and management; agricultural poisons; cosmetic and medical poisons; insect, marine animal, reptile, and plant hazards; medical-legal responsibilities in poisonings, and of special interest to those of us with industry, industrial hazards. In view of the extensive use of cyanide throughout Rhode Island industry, it behooves the occupational physician to familiarize himself with that section.

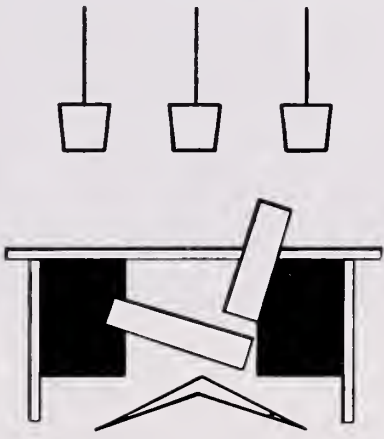
Physicians, especially those who practice in emergency rooms, should have this valuable book at hand. "Infinite riches in a little room."

G. F. Monahan, M.D.
Medical Director
General Electric Co., R.I.

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) GAspee 1-5228

NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue

Cranston, R. I. 02920

(401) 943-1884

HEALTH HAVENS

**A SKILLED NURSING HOME
MEDICARE PARTICIPATING**



Registered Professional Nurses On All Shifts
Dietician Physiotherapist
Organized But Open Medical Staff
Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited

PROFESSIONAL OFFICE SPACE FOR RENT

(In planning stage, for completion
Spring, 1976)

APPROXIMATELY 2,000 SQ. FT.
BROADWAY, PROVIDENCE

For Details:

Contact Joseph DiZoglio, M.D.
Edward Cardillo, M.D.
358 Broadway
Providence, RI
Tel. JA 1-2030

FOR SALE — CHALET

NORTH WOODSTOCK, N. H.
(Near Franconia Notch)

4 Bedrooms, Living Room with Fireplace, 2 Full
Baths, Kitchen, Furnished — 1 Acre Site with
Panoramic View.

Owner will finance — Excellent tax shelter —
Owner will sacrifice.

Weekdays 272-2900

IF YOU'RE SELF-EMPLOYED:

- **How not to pay taxes on up to \$7,500 with an INBANK retirement plan.**
- **How not to pay a sales commission on your retirement plan.**
- **How to earn the highest interest rate in INBANK history.**

You have probably heard or read about the new law that allows the self-employed to set aside up to 15% of earned income or \$7,500 (whichever is less) in a retirement plan. The money set aside is completely tax deductible, and the interest earned is not currently taxable. You pay income taxes only on receiving these funds during retirement. Then your tax bracket should be lower because of your retired status.

You qualify for this tax break if you operate an unincorporated business. So it's perfect for doctors, dentists, lawyers, artists, accountants, store owners, writers, dealers, carpenters, house painters and countless others.

• **INBANK's Retirement Savings Plan.**

There are two good reasons to set up your retirement plan with INBANK. First, unlike some other banks we won't charge you an initial fee for setting up your plan or an annual fee for running it. And INBANK's 7.50% six- to ten-year investment savings plan yields 7.90% with daily compounding. Accounts with shorter maturities and lower rates are available. The chart shows how much money the 7.50% account will mean to you. So stop in at any INBANK office and start your own retirement plan.

\$7,500 A YEAR CAN ACCUMULATE TO:		
After	With a tax-sheltered plan	Without a tax-sheltered plan
5 years	\$ 45,912	\$ 20,210
10 years	108,135	44,500
20 years	339,436	108,814
30 years	834,195	201,746

NOTE: Figures assume 50% income bracket and 7.50% rate of return

INBANK
Industrial National Bank
Something extra



R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles before delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.

TASCA
ABC
PLAN



WOMAN'S AUXILIARY

Dear Doctor,

It is the aim of The Woman's Auxiliary to the Rhode Island Medical Society to reach the \$15.00 per capita goal for the State of Rhode Island AMA-ERF program.

The two areas that we support under this program are:

I. THE MEDICAL SCHOOL OF YOUR CHOICE

The federal government has cut back on their funds to the schools in spite of the demands for expanding programs and rising costs. Therefore **YOUR SCHOOL NEEDS your SUPPORT and HELP.** Send your check to AMA-ERF BUT earmark it for your school. The Dean of your medical school receives the AMA-ERF money without strings attached to use as they see fit to solve their financial problems.

II. LOAN GUARANTEE PROGRAM

A program that many of our young physicians starting practice today have benefited from.

In this program tuition money is made available when there is a need, to a medical student, intern, or resident, who is a U.S. citizen enrolled in a full time training program of an AMA approved medical school or hospital.

With your continued support and contributions to the program, we know we will have a very successful year.

Mrs. Daniel Calenda
AMA-ERF Chairman

Send your donations to:

MRS. DANIEL CALEDA
c/o R. I. MEDICAL SOCIETY
106 FRANCIS STREET
PROVIDENCE, R. I. 02903

Make checks payable to:

AMA — ERF

for school

Now Available

ALL THE SERVICES PHYSICIANS NEED TO CARE FOR PATIENTS AT HOME

Nursing, Physical Therapy, Respiratory Therapy, Occupational Therapy, Speech Therapy, Social Service, Nutritional Counseling, Laboratory Services, EKG, EEG, X-Ray, Medical-Surgical Supplies and Equipment, Medications, Meals-on-Wheels, Homemaker-Home Health Aide, and Transportation.

WILLIAM C. HARVEY

Director

RUSSELL P. HAGER, M.D., Ph.D.

Medical Director

CALL 521-2633



157A WATERMAN STREET

PROVIDENCE, RHODE ISLAND 02906

Hopkins

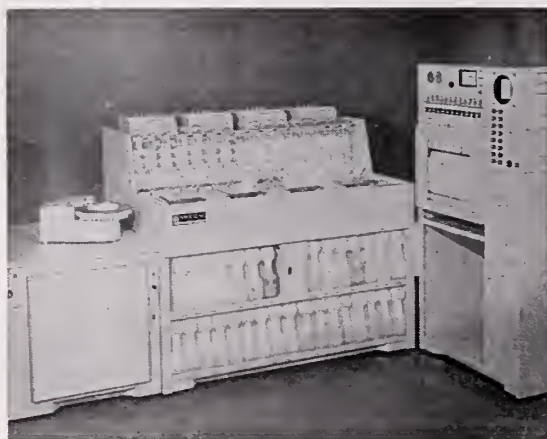
Profile "20"

Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



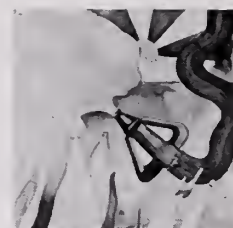
Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)



Pro-Banthine
brand of
propantheline bromide

Indications: Pro-Banthine is effective as an adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action with loss of voluntary muscle control.

For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly patients with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment of the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied in tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co., Medical Department, Box 5110, Chicago, Ill. 60680

'Antiacid' action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action — Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action — Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action — Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine® (propantheline bromide)

**a good
option
in peptic
ulcer**

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense in edema.*

Trademark

Neither inconvenient, unpalatable, expensive potassium supplements nor special K⁺ rich diets are needed as a rule. Just 'Dyazide' once or twice daily for control of edema. Serum K⁺ and BUN should be checked periodically (see Warnings section).

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—

both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy

patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreased alkali reserve with possible metabolic acidosis, hypoglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (if hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidin.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash; urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation



'Dyazide' gets excess water and salt out and helps keep essential potassium in.



Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

and useful in the management of vertigo* associated with seas affecting the vestibular system.
n relieve nausea and vomiting often associated with vertigo.*
ual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
so available as Antivert (meclizine HCl) 12.5 mg. scored
ts, for dosage convenience and flexibility.
ativert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for
ea, vomiting and dizziness associated with motion sickness.

SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with seasickness.

Probably Effective: Management of vertigo associated with diseases affecting the vestibular system.

Additional classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children. Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert[®]/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

PAIN RELIEF FOR THE MAJORITY

NO.4—for pain intensity below the need for injectables

As a rule, only pain that requires morphine is beyond the scope of Empirin® Compound with Codeine No. 4. That's because it delivers a full grain of codeine. (In the preferred phosphate form.) Its antitussive action is particularly appreciated by patients with fractured ribs, and following chest or abdominal surgery. Its low addiction liability is a bonus for all patients who require potent analgesia.

NO.3—for almost all other kinds of lesser pain

Most other kinds of lesser pain respond to Empirin Compound with Codeine No. 3—whether musculoskeletal, neurological, soft-tissue or visceral. One might say No. 3 is an "all-purpose" analgesic — not too little, not too much. Just right for your out-patients in these categories.



Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

BURNS

Wherever it hurts
EMPIRIN® COMPOUND c CODEINE

No.3, codeine phosphate*(32.4 mg) gr ½ • No.4, codeine phosphate*(64.8 mg) gr 1

*Warning — may be habit-forming.

Each tablet also contains aspirin gr 3½, phenacetin gr 2½, caffeine gr ½.

POOLS BY AQUA FUN

BUILDERS IN THE ART OF
CUSTOM POOLS

Specializing In

ONE PIECE FIBERGLASS POOLS —
NO SEAMS

WITH SELF CLEANING POOL SYSTEMS

FREE FORMS —

DESIGN YOUR OWN POOL

VISIT OUR INDOOR DISPLAY POOL

384 Atwood Ave., Rt. 5

Cranston, R.I.

Tel.: 944-2010

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

PHYSICIAN'S OFFICE FOR RENT

RUMFORD — RESIDENTIAL SECTION

FIRST FLOOR — 5 OR 6 ROOMS

FORMER FAMILY PHYSICIAN'S 19 YEARS

Call Evenings 521-6738

**We deal
exclusively
in the investment
opportunities
of tax free
state and
municipal
bonds.**



CAROLAN & CO. INC.

2401 HOSPITAL TRUST TOWER
PROVIDENCE, R.I. 02903 (401) 331-1932

Do You Prescribe Modified Diets?



Patients often need help adapting a diet to their personal needs and preferences. At the Diet Counseling Service a registered dietitian will make your prescribed diets more individualized — more effective.

A Physician's Referral is necessary. For more information call Diet Counseling Service 728-9660.

A Non-Profit Association

Pretend it's 1958. Would you invest in hula hoops?



If you put \$100,000 into hula hoops in 1958, you might be a millionaire today.

Then again, you might be broke.

In making short-term investment decisions, timing is crucial. And the results of such decisions become obvious almost overnight.

But while short-term results are interesting, they're only the beginning. It's how your original investment stacks up ten, fifteen, twenty years later that ultimately counts.

At Industrial National Bank, we've been investing funds for individuals and corporations for decades, and we've seen investment fads come and go. During that time, we've invested our clients' funds wherever imagination, professional

judgment and thorough research indicated we should.

We think our philosophy has paid off — with consistent, strong long-term performance. We're proud enough of our long-term record that we take a back seat to no one in the business of professional financial management.

In fact, we'd like to discuss that record with you, and to show you how our combination of the right people, the right philosophy, and the right organization can bring a realistic new performance orientation to the management of your investments.

Call Mr. Evans at 278-6607. Trust Department, Industrial National Bank, 100 Westminister Street, Providence, Rhode Island 02903.

iN BANK

Industrial National Bank

Something extra in Investment Management.



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU of the Providence Medical Association

Coventry Needs Good Doctors

and

TRAFFORD, INC.

has a professional building for them

YOU CAN — Lease with an option to buy

— Lease office space

— Purchase property outright

This property was an old six room colonial home that was overhauled and is now in perfect condition.

This property is suitable for two consultation rooms with a waiting room and receptionist room as well as record storage area.

FOR FURTHER DETAILS CONTACT MR. JOHN T. TRAFFORD, G.R.I. AT 821-0180.

TRAFFORD, INC.
REALTORS — INSURANCE AGENCY
884-TIOGUE AVENUE
COVENTRY, R.I. 02816

P.S. — We have financing available

Introducing

NUVEEN TAX-EXEMPT BOND FUND

Check-a-Month Plan Series 60

The coupon below will bring information on how to obtain income which is entirely exempt from Federal income taxes, in the opinion of counsel. This new series consists of 200,000 units—each of which offers you a share in a \$20,000,000 par value portfolio of professionally selected municipal bonds. The Fund's chief objectives are conservation of capital and tax-free return. Participants receive a monthly check for their proportionate share of the tax-free interest. For a free prospectus, call or write your nearest Nuveen office or:

WAYNE E. CROSS

1349 West Shore Road, Warwick, R. I.—738-4574

representing

INVESTORS DIVERSIFIED SERVICES

Please send me information of the Nuveen
Check-a-Month Plan.

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____

**NUVEEN
TAX-EXEMPT
BOND FUND**



Copies of the Prospectus may be obtained in any State only from a dealer which may offer these Units in such State.

**One contains aspirin.
One doesn't.**



Darvocet-N® 100

100 mg. propoxyphene napsylate
and 650 mg. acetaminophen



**Darvon®
Compound-65**

65 mg. propoxyphene hydrochloride,
227 mg. aspirin, 162 mg. phenacetin,
and 32.4 mg. caffeine

Lilly

Additional information available to the profession on request.
Eli Lilly and Company, Inc., Indianapolis, Indiana 46206

Dr. George W. Waterman Cancer Dialogue

INTRODUCTORY REMARKS

By Arvin S. Glicksman, M.D.

For almost a century hysterectomy has been the standard treatment of endometrial cancer, while radium therapy as an alternative, or adjunct, was introduced less than 50 years ago. Initially, it was reserved for patients for whom the surgical treatment appeared to be inappropriate. Thirty-five years ago Heyman introduced his "packing" technique, in association with a vaginal cylinder as a definitive treatment, achieving quite respectable cure rates. Based on the Stockholm techniques, combined preoperative radiation therapy with total abdominal hysterectomy and bilateral salpingo-oophorectomy was introduced into this country approximately 30 years ago. While some have reported distinct advantages for the combined treatment, this has not been unanimously agreed upon. Furthermore, for many patients neither the surgeon nor the radiotherapist have the wherewithall adequately to undertake treatment. The magnitude of the problem is amply demonstrated in the case shown in Figure 1.

Who is the victim of carcinoma of the endometrium? Characteristically this disease is associated with (Continued on next page)

ARVIN S. GLICKSMAN, M.D., *Rhode Island Hospital; Chairman, Department of Radiation Oncology*

Read at the annual Doctor George W. Waterman Cancer Dialogue, May 22, 1974, sponsored by the Rhode Island Division of the American Cancer Society.



Fig. 1



DR. GEORGE W. WATERMAN

ciated with the elderly, obese, hirsute female who has a touch of diabetes. In 1956, in a survey of diabetes and cancer at Memorial Hospital of New York, I reported that 64 per cent of the patients with endometrial cancer had abnormal glucose tolerance curves, while only 25 per cent of those with carcinoma of the cervix demonstrated this abnormality. It was interesting that there were twice as many patients with cervical cancer than with endometrial cancer at the Memorial Hospital during those years. About 15 years later, at Mount Sinai Hospital in New York, I was impressed that we were seeing a number of endometrial cases almost equal to that of cervix cases. I assumed that this was due to a different population at Mount Sinai Hospital than at Memorial Hospital; however, Gusberg did not believe that this was the case at all. He was convinced that the disease was becoming more frequent while carcinoma of the cervix was becoming less frequent. This observation has been substantiated in many centers around the country.

Today we have a distinguished panel of speakers who will discuss this increasing challenge in cancer management. The Rhode Island Division of the American Cancer Society has brought these eminent specialists here to do honor to Doctor George

W. Waterman (Fig. 2), respected, dedicated member of the Rhode Island medical community. Doctor Waterman was born in Providence and is a graduate of Brown University. He received his M.D. degree from Cornell University in 1919. In 1921, in conjunction with the late Doctor Herman C. Pitts, he established the Gynecologic Tumor Clinic at Rhode Island Hospital, the first formally structured clinic for this disease in the United States. He is nationally and internationally known for a particular approach to the treatment of carcinoma of the cervix, a disease with which he has personally had extensive experience, having managed over 2,000 cases in his own practice. In his long career he has been President of the Rhode Island Division of the American Cancer Society and a member of the Board of Directors of the American Cancer Society. He is a Past President of the Providence Medical Association, the Rhode Island Medical Society, the Obstetrical Society of Boston, the New England Cancer Society, the New England Obstetrical and Gynecological Society, and the New England Surgical Society, and a former Vice President of the American Radium Society. He is the author of many scientific articles, dealing mostly with cervical cancer. We had hoped that Doctor Waterman would be here today to participate in the discussion of the topic with which he has been so closely associated. Although he is recuperating rapidly from his recent illness, he had to send his regrets that he could not personally join with us today.

Our speakers today are: Doctors Hugh R. K. Barber, Gilbert H. Fletcher, and Rita M. Kelley. Doctor Barber is the Director of Obstetrics and Gynecology at the Lenox Hill Hospital and an Attending Surgeon in Gynecology at Memorial Sloan-Kettering Cancer Center in New York. He has written extensively and lectured widely on problems in gynecological oncology. Not only does he possess great surgical skill and competence, but also has keen insight into oncological problems. A man of wide interests and many talents, he was Captain of the Columbia University football team in 1949. He received his M.D. from P & S in New York, and received postgraduate training at the Memorial Hospital. He remained a close collaborator of the late Doctor Alexander Brunschwig and has continued to formulate new insights into gynecological cancer. It is my distinct pleasure to welcome Doctor Barber to Rhode Island.



Cancer Of The Endometrium

Progress In Understanding The Role Of Hormones Will Soon Make Possible Selection Of Patients For Hormone Treatment

By Hugh R. K. Barber, M.D.; Edward A. Graber, M.D.; Sheldon C. Sommers, M.D.; Barry Reisman, M.D.; Tae Hae Kwon, M.D.

Cancer of the endometrium is on the increase. It is the disease of the suburbia, while cancer of the cervix continues to be the disease of the inner city. In New York State Randall¹ reports that the incidence has increased from 56 to 59/100,000 while the death rate has dropped from 24 to 17/100,000. Although cancer of the breast and colon are the two most common types of cancer occurring in women, cancer of the endometrium

HUGH R. K. BARBER, M.D., *Director, Department of Obstetrics and Gynecology, Lenox Hill Hospital, New York City; Attending Surgeon, Gynecology Service, Memorial Hospital, New York City; Clinical Professor of Obstetrics and Gynecology, Cornell Medical College, New York City.*

EDWARD A. GRABER, M.D., *Associate Director, Department of Obstetrics and Gynecology, Lenox Hill Hospital; Clinical Associate Professor of Obstetrics and Gynecology, Cornell Medical College.*

SHELDON C. SOMMERS, M.D., *Director of Laboratories, Lenox Hill Hospital.*

BARRY REISMAN, M.D., *Assistant Adjunct Obstetrician-Gynecologist, Lenox Hill Hospital.*

TAE HAE KWON, M.D., *Fellow in Gynecologic Oncology, Lenox Hill Hospital.*

Read at the annual Doctor George W. Waterman Cancer Dialogue, May 22, 1974, sponsored by the Rhode Island Division of the American Cancer Society.

may challenge their position in the next decade if its rate of increase continues.

Cancer of the endometrium in its early stages can be successfully treated with relatively unsophisticated techniques and is cured more frequently than malignant disease of any other organ except the skin. However, the figures of Gusberg² at Mount Sinai Hospital indicate a five-year survival rate of only 55.9 per cent and Frick³ reports an overall survival of 66.1 per cent from Columbia Presbyterian Medical Center. Perhaps it is time that the concept of this being a relatively benign type of cancer should be reevaluated.

One of the problems in evaluating any series of patients is how to interpret the pathological specimen. This is particularly true of the diagnosis of adenomatous hyperplasia of the endometrium versus carcinoma in situ, as well as the problem relative to early invasion. Preoperatively the cancer must be judged on the invasion of the endometrium by malignant epithelial cells since it is unlikely that myometrial tissue will be obtained on a curettage making a histologic diagnosis often a matter of a subjective decision on the part of the pathologist. In addition, different criteria are employed to interpret the results of the fractional curettage in stage II cancer of the endometrium. The F.I.G.O.* classification is specific in spelling out the criteria, but the interpretation by different services may make a comparison of results a difficult problem.

Federation Internationale de Gynecologie et d'Obstetrique.

(Continued on next page)

INCIDENCE

Cancer of the endometrium is predominantly a disease of the peri- or postmenopausal age groups. However, it does occur in women of less than 40 years of age in five per cent of cases and has been found as early as age 17 years. More than 70 per cent of the cases occur after age 50, while 20 per cent occur between the age of 40 and 50.

Early diagnosis is the key to successful treatment in cancer of the endometrium. High-risk groups of patients who are candidates for developing endometrial cancer must be followed and carefully screened. The physical habitus of these patients is well known to the gynecologist. In broad terms they are patients with an abnormal pituitary function⁴ and a long history of hyperestrogenism which may have many causes. Reports indicate that there is a higher incidence of cancer of the endometrium occurring at an early age among patients with continuous unopposed estrogen stimulation of the endometrium. All of these parameters help identify clinically the high-risk patient, but screening methods employing cytology have been more elusive. The pick-up rate on routine screening for asymptomatic patients is only about three per cent or less of all endometrial cancers. Negative cytology does not have the same accuracy in prognosticating that the development of cancer is highly unlikely, because on cytologic evaluation the preinvasive lesions are not diagnosed with the same accuracy as obtained in cancer of the cervix. Therefore, it is highly unlikely that screening programs directed at detecting cancer of the endometrium will have a major impact on morbidity and mortality rates in the foreseeable future. The cytologist can diagnose the benign or malignant endometrium, but has trouble detecting the in-between groups with adenomatous hyperplasia, dysplasia, or cancer in situ. However, he can do this with a high degree of accuracy if tissue is obtained for paraffin block histologic examination.

SYMPTOMS

The first and most significant symptom is abnormal vaginal bleeding. It is not only related to the menopausal patient alone but is also the most common symptom in all age groups. The point to emphasize is that abnormal vaginal bleeding in any age group should be suspect for a serious problem and be accorded special attention.⁵

DIAGNOSIS

There are certain pitfalls that may delay an early diagnosis when cancer of the endometrium

is present. These can be negated if a curettage is carried out in the presence of abnormal bleeding at any age and is mandatory during the perimenopausal years. This should be done without delay even though the Pap smear has been reported as negative. The accuracy of the techniques for detecting endometrial cancer (vaginal pool sample, 50 per cent; ectocervical cell sample, 70 per cent; endometrial brush technique, 75 per cent; uterine aspiration smears, 88 per cent; intra-uterine lavage, 87 per cent; Gravlee jet washer, 93 per cent) leave much to be desired. Tissue biopsy of the endometrium is important, but unfortunately it is not always possible to obtain this without putting the patient to sleep. However, it is to be restated and reemphasized that a fractional curettage should be carried out in every postmenopausal patient with a bleeding problem.

In January 1971 a new classification was adopted and will be outlined. This paper has followed the new classification. In the new classification a case should be classified as carcinoma of the corpus uteri when the primary site of the growth is the corpus. Cases of mixed mesenchymal tumors and so-called carcinosarcoma should be excluded. The staging is listed as follows:

Stage 0 — Carcinoma in situ. Histologic findings suspicious of malignant changes. Stage 0 should not be included in the therapeutic statistics.

Stage I — The carcinoma is confined to the corpus.

Subdivisions of Stage I:

Stage Ia — The cancer is present in a uterus measuring up to eight centimeters in length from the external os to the upper limits of the uterine cavity.

Stage Ib — The carcinoma is present in a uterus measuring more than eight centimeters in length from the external os to the upper limits of the uterine cavity.

G1 — Highly differentiated adenomatous carcinomas.

G2 — Differentiated adenomatous carcinomas with partly solid areas.

G3 — Predominantly solid or entirely undifferentiated carcinomas.

Stage II — The carcinoma has involved the corpus and the cervix (simultaneous presence of normal cervical glands and cancer in the same field will give the final diagnosis).

Stage III — The carcinoma has spread outside the uterus but not outside the pelvis.

Stage IV — The carcinoma has extended outside the true pelvis or has seriously involved the mucosa of the rectum, or bladder, or both. A bulbous edema as such does not permit allotment of a case to Stage IV.

NATURAL HISTORY

Adenocarcinoma of the endometrium is either localized or diffuse over the surface of the endometrium. Cancer arising in the endometrium tends to remain within the uterus for a long period of time. As it grows it invades the myometrium and spreads toward the isthmus and the endocervix. From the myometrium it spreads to and through the serosa to the peritoneal cavity and from the endocervix spreads to the pelvic nodes. The lymphatics increase in amount as the serosa of the uterus is approached; deep penetration of the myometrium is associated with an increased incidence of positive node involvement. Since the myometrium in the postmenopausal woman is much thinner than in the premenopausal woman, a little penetration of the myometrium may bring the cancer into contact with the lymphatics and account for the greater potency of endometrial cancer among the postmenopausal woman.

The lymphatic drainage of the upper part of the body of the uterus is along the course of the infundibulopelvic ligament. This is obviously not common in the early stages of cancer of the endometrium. Otherwise, it would not be possible to achieve such excellent clinical results.

The time has come for us to reevaluate our treatment of endometrial cancer. Approximately 10-15 per cent of stage I cancer of the endometrium will have lymph node metastases in the pelvis and 36 to 40 per cent in stage II. The depth of myometrial invasion also is directly related to the percentage of lymph node metastases. B. V. Lewis⁶ reported on 16 cases in which there was no myometrial invasion, and 41 had less than two mm invasion. None of the 57 patients had pelvic node metastases. However, when the invasion extended within two mm of the serosa, 36 per cent had metastases to the pelvic nodes. The depth of invasion correlates well with the incidence of positive nodes. In a collected series 16 patients among 53 (30 per cent) with positive nodes lived five or more years. In view of these findings it is obvious that the nodes should be treated with surgery, or radiation, or both, particularly among those at high risk for pelvic nodal metastases. It is evident that a test is needed that will help in selecting those patients who will be benefited by a node

dissection. Perhaps in the future those patients showing good cell mediated immunity and no enhancing or blocking antibodies, in whom the nodes grossly appear normal, may be best treated by leaving the nodes in situ, while those with poor cellular immunity and a high blocking antibody may be candidates for eradicating the pelvic nodes, either by surgery or irradiation.

The histological grading serves as one more parameter for evaluating the incidence of pelvic node metastases and depth of myometrial invasion. Although histological grading does not correlate as well as does the depth of myometrial invasion with the incidence of nodal involvement, it should be carried out. Reports indicate that cytologic grading of endometrial carcinomas, particularly by measuring nucleoli and their RNA content, has demonstrated that the higher grade carcinomas have larger single nucleoli, more multiple nucleoli and greater variations in nuclear and nucleolar structure. Nuclear grading may be considered an adjunct to and refinement of histologic grading of cancers. Nuclear grades developed by M. M. Black are as follows: Nuclear grade 1 is the most abnormal, with wide variations in nuclear size, chromatin content, and appearance of nucleoli. Nuclear grade 2 has a definite but less severe nuclear and nucleolar atypism. Nuclear grade 3 comprises differentiated cancer cells whose nuclei closely resemble those of adjacent non-neoplastic cells.

In summary, it can be stated that the group at high risk for extrauterine spread are (1) involvement of the lower uterus or cervix, (2) histologic grade III lesions, and (3) myometrial invasion.

TREATMENT

The patients will be discussed according to the staging methods established by the F.I.G.O. classification. There were 189 patients treated from 1962 to 1972, a nine-year period, 96 of whom were suitable for a five-year evaluation, while 93 were treated in the last four years of the study. Of this number, 150 were in stage I, 17 in stage II, 12 in stage III, and 10 in stage IV. Of this group, two patients treated five or more years ago and one patient in the last four years were lost to followup. Therefore, all 189 are available for study of depth of invasion, differentiation of tumor and site of the primary lesion, but only 186 are available for survival evaluation (Table I), and the three not found in follow-up are considered dead. From 1962

(Continued on next page)

TABLE I
CANCER OF ENDOMETRIUM
1962 to 1972

Stage Grade	I	II	III	IV	Total
I	20	4	0	0	24
II	115	10	10	6	141
III	15	3	2	4	24
Total	150	17	12	10	189

to 1968, 96 patients were studied as listed in Table II. When the penetration of the myometrium was 50 per cent or less, 62 of 67 patients lived five years, while four of nine survived five years if the penetration was greater than 50 per cent. Table III gives the same evaluation for patients treated in the last four years of the study.

Although the patients treated more than five years ago received 21 different modalities of therapy, there were only four major types of treatment, while the remainder represented variations of radiation therapy (Table IV). The type of treatment for patients treated in the last five years is given in Table V.

The survival is given in Table VI. In Stage I, 68 patients (one lost to follow-up and reported as dead) of 76 (89.4 per cent) are living and well at five years; five of eight (62.5 per cent) in Stage II; four of six in Stage III; and none of six in Stage IV. The overall survival rate is 80.2 per cent living and well at five or more years.

Twenty-eight patients of the 189 had a radical hysterectomy, and 22 are living and well. Of the 28 patients receiving a radical hysterectomy, 15 were operated on five or more years ago and 12 are living and well more than five years.

CERVICAL INVOLVEMENT

The problem of cervical involvement will be dis-

cussed as a separate entity because of the poor prognosis in this stage of endometrial cancer (stage II). It has long been accepted that a conservative total hysterectomy in most instances is inadequate therapy because of the possibility of cutting across cancer which may have spread to the paracervical areas. The findings in endometrial cancer are not dissimilar to those reported for cancer of the cervix. It is extremely important to determine whether the endocervix is involved by endometrial cancer. Preoperatively this can only be evaluated by a careful endocervical curettage. In such cases the simultaneous presence of normal cervical glands and cancer in the same piece will give the final diagnosis. Stage II accounts for 10 to 15 per cent of endometrial cancer, whereas at least 36 or 37 per cent will have positive nodes. In addition, as the endometrium invades the myometrium, there is then growth towards the cervix and from there into the parametrial tissues. The anaplastic and poorly differentiated cancer has a propensity for deep invasion of the myometrium, spread to the cervix, and involvement of the pelvic nodes. In view of these findings and the relatively low survival rate of 50 per cent (range 40 to 70 per cent) it is most important to have a very careful diagnosis and workup. An aggressive combination of both radiation and surgery is indicated for these patients.

RECURRENT CANCER OF THE ENDOMETRIUM

Although there are fewer indications for pelvic exenteration among patients with cancer of the endometrium than in those with cervical cancer, there is a place for pelvic exenteration among the methods of treatment used as a definitive therapy

TABLE II
CANCER OF ENDOMETRIUM
1962 to 1968

Stage	I	II	III	IV
Depth of Uterus		5-year Survival		
	1a	50		
	1b	26		
Differentiation				
G 1		10		8
G 2		61		56
G 3		5		4
Cell Grading (Nuclear Grade)		11-52-13		
Depth of Invasion:	Per-centage	No.	5-year Survival	
Per cent =				
Depth of Invasion	0-25	57	53*	6
Myometrial thickness	26-50	10	9	4*
	51-75	6	4	2
	76-100	3	0	1
Site of Primary	Fundus	66		
	Cornua	10		
			Endocervix	8
			Fundus	6
			Fundus	6

TABLE III
CANCER OF ENDOMETRIUM
1968 to 1972

Stage	I	II	III	IV
		5-year Survival		
Depth of Uterus	Ia 48 Ib 26	45* 22		
Differentiation				
G 1	10	8*		
G 2	54	51		
G 3	10	8		
Cell Grading (Nuclear Grade)		10-54-10 9-56- 9		
Depth of Invasion:	Per- centage	No.	5-year Survival	
Per cent =				
Depth of Invasion	0-25	54	50*	4 4 1 0 2 0
Myometrial Thickness	26-50	12	10	2 1 2 2 1 0
	51-75	5	5	2 2 2 2 1 0
	76-100	3	2	1 0 1 1 0 0
Site of Primary	Fundus 68			
*1Lost to follow-up	Cornua 6	Endocervix 9	Fundus 6	Fundus 4

TABLE IV
CANCER OF THE ENDOMETRIUM
1962-1968

	Stage I No. Living	Stage II No. Living	Stage III No. Living	Stage IV No. Living
Total Abdominal Hysterectomy and Bilateral Salpingo-Oophorectomy + Other Treatment	59	54	3 2	5 4 1 0
Supracervical Hysterectomy + Other Treatment	2	2		1 0
Radical Hysterectomy	8	7	4 3	1 0
Vaginal Hysterectomy + Other Treatment	5	3		
Miscellaneous	2	2	1 *	2 0
No Treatment				2 0
Total	76	68*	8 5*	6 4 6 0
*1Lost to follow-up				

TABLE V
CANCER OF ENDOMETRIUM
1968-1972

	Stage I No. Living	Stage II No. Living	Stage III No. Living	Stage IV No. Living
TAH, BSO + Other	61	56*	3 1	4 4 1 1
Supracervical Hysterectomy	1	1		
Vaginal Hysterectomy	3	2		
Radical Hysterectomy	7	6	5 5	2 1 1 1
D & C, Radium and Cobalt	1	1	1 1	2 2
Refused Treatment	1	1		
Total	74	67*	9 7	6 5 4 4
*1Lost to follow-up				

TABLE VI
CANCER OF THE ENDOMETRIUM

STAGE I	Number	Living 5 or more years 68*	Per cent
Ia	50		89.4
Ib	26		
G 1	1^		
G 2	61		
G 3	5		
STAGE II	8	51+	62.5
STAGE III	6	4	66.6
STAGE IV	6	0	
Total	96	77	80.2
1+2Lost to follow-up			

for this cancer.⁷ If indeed the progestins are able to provide a five-year cure in advanced cancer of the endometrium, this will become the treatment of choice. Although certain spectacular results have been recorded, there is no series of any magnitude currently reported, and pelvic exenteration, when indicated, remains the best method of treatment.

Based on our study and a review of the literature, a protocol is presented for pre-treatment evaluation and for therapy. The preoperative workup is presented as follows: 1. routine history and physical; 2. complete blood count; 3. urinalysis; 4. SMA-12; 5. chest x-ray; 6. intravenous pyelogram; 7. metastatic x-ray studies; 8. proctoscopy; 9. barium enema; 10. cystoscopy; 11. bone scan, and 12. lymphangiogram. Eight through 12 are optional.

Each patient should be examined under anesthesia and a fractional curettage with sounding of the uterus should be carried out.

THERAPY

Stage 0 — Carcinoma in situ — The management should be guided by the definition established by the pathology department of a given hospital and should be tailored to fit the needs of the patient, her age, and desire for future child-bearing. In selected young patients with minimal disease an alternative to hysterectomy may be repeat curettage in three or four months or a course of progestational agents followed by repeat curettage.

Stage IaG1 — Total hysterectomy and bilateral salpingo-oophorectomy followed by postoperative vaginal radiation. Some oncologists may elect a random study employing a type of radical hysterectomy.

In patients in whom the histological grade is G2 and G3, external pelvic radiation should be given preoperatively followed by total hysterectomy, bilateral salpingo-oophorectomy, and vaginal radiation postoperatively.

If preoperative external radiation has not been given and the surgical specimen reveals moderate or extensive myometrial invasion (one-third or more of myometrial penetration), postoperative external radiation should be given. In those patients in whom the histological grade is found to be G2 or G3 instead of G4, external x-ray therapy should be given postoperatively.

Stage Ib — Preoperative external pelvic radiation followed by total hysterectomy and bilateral

salpingo-oophorectomy six weeks later. Postoperative vaginal radiation is indicated. The alternative to total hysterectomy may be a randomized selection of a type of radical hysterectomy.

Stage II — Preoperative external pelvic radiation is followed in six weeks by a modified radical hysterectomy and pelvic node dissection. Postoperative vaginal radiation should be given. Since there is an increased incidence of pelvic nodes (up to 37 per cent) among this group, careful biopsies should be taken of the paraaortic nodes.

Stage III — If the lesion involves only the adnexal structures, preoperative x-ray therapy followed by total hysterectomy and bilateral salpingo-oophorectomy should be the treatment. Postoperatively vaginal radiation is given. An alternative plan to total hysterectomy is to substitute a modified radical hysterectomy.

Stage IV — If the spread is limited to the pelvis with bladder or rectal involvement, or both, the patient should be treated with external x-ray treatment as well as intravaginal and intrauterine radium insertion. In four to six weeks the patient should be evaluated for radical surgery. Initially some patients may qualify for a radical surgical attack, and, if the disease is limited to the midline, pelvic exenteration should be considered as a modality of treatment.

Distant Metastases — Primary progestational therapy is indicated. Localized disease without response to progestational therapy should be treated with x-ray therapy.

In the presence of widespread disease and no response, chemotherapy should be tried. However, in general, cancer of the endometrium does not respond to chemotherapy.

RADIATION THERAPY

A few words might be pertinent relative to the radiotherapy used in conjunction with this disease. It has been shown that adjunctive radiotherapy in a patient with Stage IaG4 disease does little to improve survival. However, in disease beyond this there is no doubt that adjunctive radiotherapy does add to the number of women alive at five years. Its effect basically is in diminishing the mortality due to reduction of local recurrence, particularly of the vault.⁸ There is still discussion as to the relative effectiveness of the preoperative or postoperative radiation.^{9, 10} Most believe that there is little or no difference whether the radiation is given before or after the operation. It has been shown that it is extremely difficult to cal-

culate the dose inside the uterus when one uses multiple Heyman capsules.¹¹ In the last five years there has been a shift away from using Heyman packing technique to the use of whole pelvic irradiation in the range of 4,000 rads.¹² This should include the lymph node areas of the pelvis. This has been a major change in the treatment of cancer of the endometrium.

CYTOGENIC FACTORS IN CANCER OF THE ENDOMETRIUM

It appears that the majority of cancers of the endometrium have near diploid modal chromosome numbers, although a substantial majority have modal numbers in the triploid-tetraploid range. The tumors in the low ploidy group tend as a group to be better differentiated than tumors in the high ploidy group. This influences the prognosis in favor of the low ploidy group. The frequent occurrence of diploid modes appears to be contrary to the observations in most other types of invasive tumors and in other human epithelial tumors where a considerable variation in chromosome numbers within tumors and a variety of modes have been observed. A specific karyotype pattern has not been found in endometrial carcinomas, although over-representation of group C chromosomes seems to be a common feature. In view of the exceptionally high incidence of pseudo-diploid and diploid cells in invasive endometrial carcinomas, it seems that complete karyotype analysis of seemingly normal cells is essential in cytogenetic investigation of these lesions. It has been reported that diploid cells are common in cancer of the endometrium and their number decreases with progression of disease.

The majority of premalignant endometrial neoplasms have chromosome numbers in the diploid range. There are few numerical or structural chromosome abnormalities, although they do occur in some cases.

HORMONE RECEPTORS

With the discovery that breast cancer cells retained the ability to incorporate and retain estrogens both in vitro and in vivo, a new era was started in cancer endocrinology. The road has been uphill, progressing from outmoded to sophisticated methodology. A great deal of information is now available to us. For those interested in this problem it is important to be familiar with the background of the hormone dependent and hormone nondependent tumors. The concept of utilizing the available data on hormone receptors in clinical oncology would eliminate much of the guesswork

in spotting the high-risk patient, supply a more logical selection and monitoring of therapy, and also supply a method for selecting and controlling the management of recurrent endometrial cancer.

It has been confirmed that cells which depend on hormones for optimal growth and function contain specific steroid binding proteins, so-called hormone receptors. Jensen's work in the selective binding of estradiol by the rat uterus opened this field of research. The mechanism for the interaction of the hormone with target cells takes place by a two-step mechanism. Perhaps there are as yet an undetermined number of steps. A discussion of the discoveries that have been reported follows.

The primary event of hormone action is the specific interaction between hormone and responsive cell. Since many cells do not recognize certain hormones, it is evident that the receptor sites are highly specific. Since very few hormones show any effect when added directly to cell-free systems, it is concluded that the action starts at the cell membrane. For the past nine or 10 years it has been known that hormones regulate the synthesis of protein and RNA. The steroid first binds to the extranuclear receptor and is then transported into the nucleus. It then becomes associated with specific acceptor sites in the chromatin. The hormones activate genes and direct transcription of a new group of messenger RNA, which by a process of translation can code for the synthesis of specific proteins. Estradiol and progesterone have been shown to act by modifying nuclear gene expression (transcription). The major amount of data has been accumulated by the blocking action of actinomycin D, which blocks the synthesis of messenger and ribosomal RNA and puromycin, and cycloheximide which blocks translation and inhibits the protein synthesis. These two anti-metabolites have been used to determine the step at which the hormone acts. Autoradiography has demonstrated the nuclear localization of the tritium labeled hormone in the uterus and the fallopian tube.

In summary, it can be stated that the specific association of a hormone with a binding protein is necessary as a preliminary to its action at the nuclear effector site on the gene. This leads to stimulation of the RNA transcription and then to protein synthesis. For peptide hormones the ubiquitous cyclic AMP seems to be an intracellular messenger. It mediates the production of AMP 3', 5' adenosine monophosphate. It acts as an intracellular messenger modifying patterns of bio-

(Continued on next page)

synthesis through the repression or depression of genes. The message is received and decoded by the interaction of the hormone with the cell membrane. A link between these two systems has been established through the observation that progesterone increases cyclic AMP formation and that cyclic AMP itself can affect gene transcription and translation. The hormone can be considered the first hormone joining up with a macromolecular protein on the cell membrane. An enzyme, adenylylase, can change adenosine triphosphate to 3', 5' cyclic adenosine monophosphate and act as a second messenger. This results in hormone action (third messenger) i.e. gluconeogenesis, steroidogenesis, lipolysis, and permeability.

Nordqvist¹³ in a series of patients showed that, when negative patterns for receptors were present, only 3/26 had remission after hormone treatment, while 10/13 experienced objective remission when the cancer cells show evidence of good hormone receptor mechanism. Important observations have been made on progesterone interaction with target cells and have shown that the binding capacity of progesterone is increased by 20 times when the animal was primed with estrogens. It has been concluded that cancer cells without hormone binding ability are unlikely to be hormone dependent and to respond to endocrine therapy. Nordqvist¹⁴ has reported that the most direct effect of progesterone is inhibition of growth rather than differentiation. However, receptors may be present without the tumor being able to respond to the hormones and is probably related to other changes in the genetic code.

A great deal of work has been done on the association between cancer of the endometrium and hormone stimulation. Paradoxically, cancer of the endometrium occurs at a time when the hormone titer is decreasing. There may be explanations for this, i.e. low doses of estrogen may serve to stimulate while a normal or high titer may act as a feedback mechanism and serve as a control or regulator of hormone secretion. A brief review of the estriol/estradiol-estrone ratio may serve to clarify the problem. Estriol has been considered a noncarcinogenic estrogen while estradiol and estrone have been cast in the role of being carcinogenic. It is concluded that estriol acts as an antagonist of carcinogenic activity of estradiol-estrone. Oriental women who have a low incidence of cancer of the endometrium, breast, and ovary, (which are hormone dependent organs), as compared to Caucasian women, have a high estriol

titer between ages 15 to 19 years. However, as each group moves toward age 40 the difference decreases until it is negligible. Since there is little difference at the time that the incidence of cancer in these three organs begins to develop, it must be concluded that estriol served to protect the immature cell. This may be similar to the group of cases reported by Herbst in which the immature cells were changed with the appearance 14 to 20 years later of a malignancy in the form of a Mullerian type of adenocarcinoma of the vagina. The role of the stilbestrol is difficult to evaluate since estrogens are growth stimulants but not cell transformers.

Hausknecht and Gusberg¹⁵ measured the urinary metabolites of estradiol in normal postmenopausal women and postmenopausal women with endometrial carcinoma. They found no statistical difference in the excretion of the classical estrogen nor in the estriol quotient. Sutery suggests that there is an increased peripheral conversion (2 or 3 times over the normal) of estrogen precursors, mainly androstenedione, in the postmenopausal woman that produces an excess amount of estrone. This in turn may produce endometrial hyperplasia in older women. Gusberg showed that there is a higher ratio of estrone to estradiol in the blood of postmenopausal women with endometrial cancer. They did find that the postmenopausal woman with endometrial cancer excretes less total estriol glucuronide as compared to estrone glucuronide than does the normal postmenopausal woman, and suggested that the protective effect of estriol was lost. Gusberg also reported a significantly higher conversion rate of Δ 4-androstenedione to estrone in those postmenopausal women with endometrial cancer. Rubin, measuring the circulating estrone and estradiol concentrations, showed the mean ratio once again to be significantly higher for those with cancer. Gusberg reported that it appears that the postmenopausal pre-hormone is androstenedione and that the notable postmenopausal estrogen is estrone. Additional reports indicate another point cannot be adequately explained -- that 90 per cent of patients with endometrial cancer have ovarian stromal hyperplasia.

Nordqvist has investigated the influence of steroid hormones on human endometrial carcinoma in organ cultures and heterotransplants. Progesterone impaired the success of organ culture, and estrogen was found to potentiate these cytostatic and cytolytic effects. In culture the endometrial cancers showed a marked dose-dependent sensitivity to pro-

(Continued on page 285)

Radiation Treatment Of Carcinoma Of The Endometrium

Radiation Has A Place In Preoperative Treatment And Where Surgery Is Contraindicated

By Gilbert Fletcher, M.D.

I am very pleased to be here. Since I was asked to talk for 20 minutes, I had to make a severe selection of the material, since it would take much longer to give in its entirety. Since I have been privileged to have read Doctor Barber's paper, I will go into points which were not covered in his presentation.

Some of the tables come from a recent study that Doctor Felix Rutledge and his group have made. Others have been made up to demonstrate specific aspects in the management and results of endometrial cancer. The M. D. Anderson Hospital is a State Cancer Hospital, located in the Southwest, which means that our patient population is of a low economic social level. The incidence of early versus late disease is totally different from the patients of whom Doctor Barber talked. By and large, we see late lesions or the patients have associated problems, usually severe medical conditions.

Until recently at the M. D. Anderson Hospital treatment for cancer of the endometrium, even for the early cases, has been preoperative irradiation followed by hysterectomy.

GILBERT FLETCHER, M.D., *Director of Radiation Therapy, M. D. Anderson Hospital, Houston, Texas.*

Read at the annual Doctor George W. Waterman Cancer Dialogue, May 22, 1974, sponsored by the Rhode Island Division of the American Cancer Society.

ARVIN S. GLICKSMAN, M.D.:

It is very difficult indeed to introduce a man whose accomplishments have been so great and whose contributions have been so important in the field of Radiation Oncology. Doctor Gilbert Fletcher has been the Director of Radiation Therapy at the M.D. Anderson Hospital in Houston for a quarter of a century. The emergence of the M.D. Anderson as a world center for cancer has paralleled his career in Houston, and in no small part results from his great work. A man of enormous energy and skill, he has unstintingly pioneered a School of Radiotherapy in the United States that is recognized as a world leader in Radiation Oncology. His contributions are legion, and he has been the recipient of innumerable honors. It is a great personal pleasure to have Doctor Fletcher visit us in Rhode Island.

The Stage II cases, i.e., those with involvement of the cervix, corpus et collum of Heyman's classification, did not have a radical hysterectomy. They were treated by preoperative irradiation and an extrafascial conservative hysterectomy. The patients with cervical involvement had, after 4,000 rads to the whole pelvis, a radium system similar to the one used for cancer of the cervix, as one wishes to emphasize the dose to the paracervical areas. In essence, they are treated like the barrel-shaped squamous cell carcinomas. If the patients are medically inoperable, or too obese, or if the disease is

(Continued on next page)

TABLE I
CARCINOMA OF ENDOMETRIUM
The M. D. Anderson Hospital 1948-1969
Survival by Treatment*

Stage	Irradiation+ Hysterectomy†		Irradiation Only**	
	No. Cases	% Survival*	No. Cases	% Survival
I	313	90%	106	58.5
II	69	66%	31	44.0

* Berkson-Gage (five year)

† Clinicopathological staging

** Clinical staging for the patients treated with irradiation only

technically unresectable, radiation therapy alone has been employed. It is only in the last few years that surgery alone has been used for very early disease, i.e. well-differentiated tumor with a normal-sized uterine cavity. There are now 19 patients treated by surgery alone with a follow-up of 2 to 5 years, and all of these 19 patients are NED (no evidence of disease).

In Table I the patients treated by preoperative irradiation and hysterectomy have been staged according to the findings of the specimen. The patients treated by irradiation alone are staged clinically. If the disease is limited to the uterus, there is a 90 per cent cure rate. The adenoacanthomas were reviewed separately and were shown to have exactly the same results, either with preoperative irradiation or irradiation alone in Stage I and Stage II. There is, therefore, no reason to separate them in the analysis and in methods of treatment.

The total incidence of failures within the pelvis is 6.5 per cent in the patients with Stage I disease treated either with preoperative irradiation and hysterectomy or irradiation only, and 11 per cent

in Stage II (Table II). These are very low figures. Obviously the techniques which have been used are quite effective as measured by the control rate within the treated area. This is why Doctor Rutledge has been and still is reluctant to abandon preoperative irradiation even for the early cases — in other words to abandon a “winning horse.” The patients died either from distant metastases or from the medical diseases which rendered them inoperable.

For some time Doctor Rutledge did perform a significant number of lymphadenectomies, but the incidence of involved nodes in the obturator, hypogastric, external, and common iliac areas was too low to justify carrying on with the procedure with its added complications.

MEDICALLY INOPERABLE PATIENTS

Table III shows in the Stage I patients a 46 per cent NED rate with only 15 per cent of the patients dying with disease in the pelvis. Of the 47 patients who died, 32 (68 per cent) died from the medical diseases which made them inoperable. The results in Stage II are of the same order (Table III).

The fact that a hysterectomy cannot be performed is no reason to think that the patient is doomed to die from her cancer. It means that one does not need to take chances to perform a hysterectomy. Of course, one has to insert proper Heyman packings in order to achieve those results. Several of the patients who had a local recurrence had had only 2 Heyman packings 3 weeks apart, or 4,000 rads to the whole pelvis and one Heyman packing. For the last 10 years, if a hysterectomy cannot be performed, the treatment consists either of 3 Hey-

TABLE II
CARCINOMA OF ENDOMETRIUM
The M. D. Anderson Hospital 1948-1969
Pelvic Recurrences in All Stage I and II Treated by Preoperative + Hysterectomy or Irradiation Alone

Stage*	No. of Cases	Vaginal Apex		Lower Vagina		Pelvic Wall		Total	
		No.	%	No.	%	No.	%	No.	%
I	466	11	2.5	6	1	13	3	30	6.5
II	109	7	6.5	0	0	5	4.5	12	11

* Part clinicopathological and part clinical staging

TABLE III
MEDICALLY INOPERABLE GROUP OF CARCINOMAS OF THE ENDOMETRIUM
1948-1969
Three-Seven Years Status

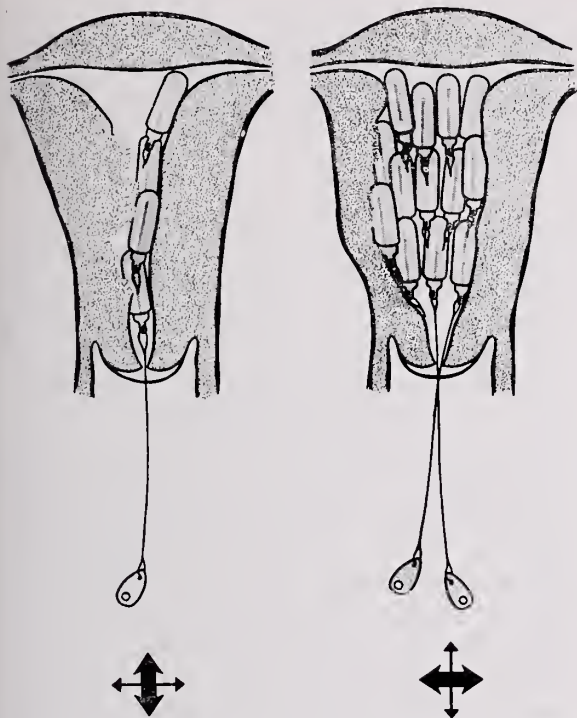
	No. of Pts.	Alive NED	Dead Pelvic Dis. Only or With DM	Dead DM Only	ID
Endometrium Only	87	46% (40/87)	15% (13/87)	2/87	32/87
Corpus et Collum	29	41% (12/29)	17% (5/29)	6/29	6/29

Abbreviations: DM—distant metastases
ID—intercurrent disease
NED—no evidence of disease

Figure 1

Graphic illustration of the advantage of stretching the uterine cavity

Courtesy: Fletcher GH: Textbook of Radiotherapy, Second Edition, Philadelphia, Lea & Febiger, 1973, P. 676



man packings, each 2 weeks apart (twice vaginal radium to the surface dose of 8,000 rads); or 4,000 rads external irradiation followed by 2 Heyman packings, 2 weeks apart (one vaginal radium with a surface dose of 4,000 rads).

If the uterus is moderately enlarged or if there is an anaplastic tumor, one uses 4,000 rads to the whole pelvis and 2 Heyman packings, each 2 weeks apart. If no hysterectomy is to be done, it is imperative to use Heyman packing with Heyman capsules of appropriate size. The uterus must be stretched (Figs. 1 and 2) so that there are sources within the various recesses around polypoid masses.

Figure 2

The force exerted to find a place for another capsule must be spread broadly against the uterine wall and not through any one capsule placed before. This is prevented by holding the retention wires of all capsules in the uterus at the same level, causing them to resist being pushed forward by additional sources inserted from below.

Holding the wires firmly tends to align the capsules parallel unless the uterine cavity and its tumor masses direct them otherwise. A uterine dilator of a diameter near the size of the capsules used serves as a suitable instrument to arrange the capsules that lie obliquely and perpendicular to others so that a maximum number will be accommodated.

Courtesy: Fletcher GH: Textbook of Radiotherapy, Second Edition, Philadelphia, Lea & Febiger, 1973, P. 677

Two weeks later packing is done again, usually with fewer sources, as polypoid masses have sloughed off with, therefore, better irradiation of the disease

(Continued on next page)

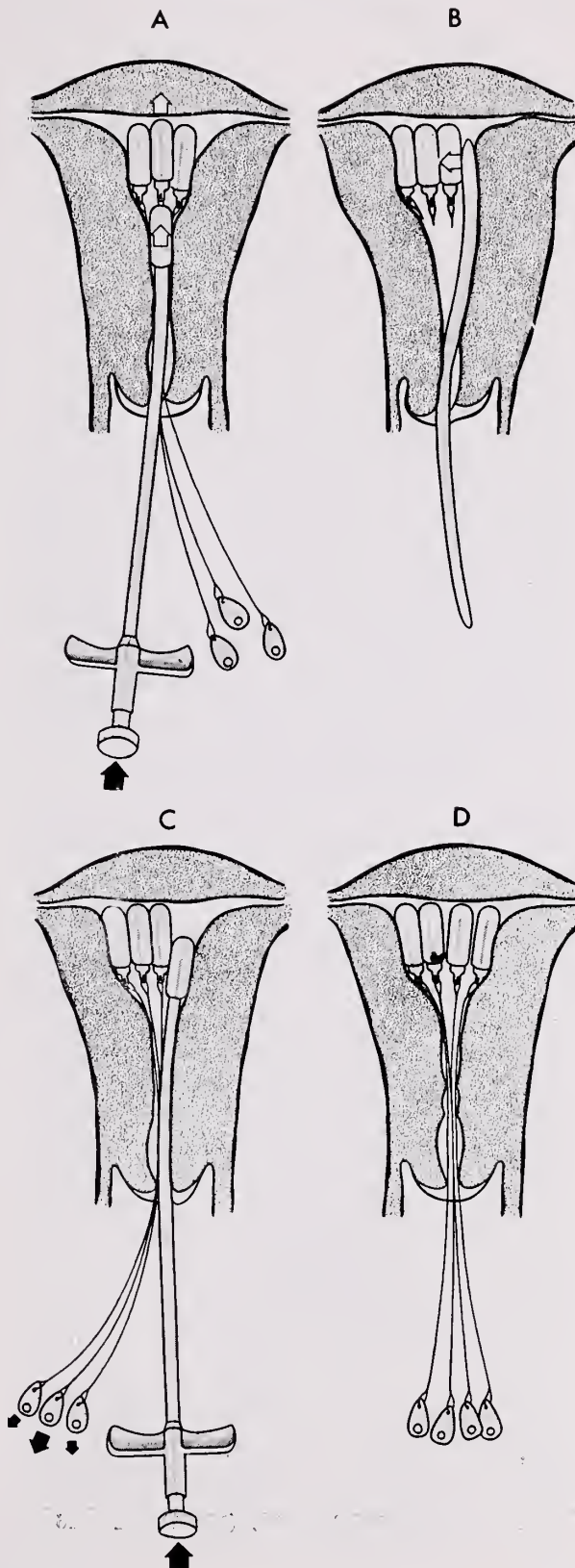


TABLE IV
UNRESECTABLE GROUP OF CARCINOMAS
OF THE ENDOMETRIUM
1948-1969
Three-Seven Years Status

No. of Pts.	Alive NED	Dead Pelvic Dis. Only or With DM	Dead DM Only	Other Causes
32	19% (6/32)	59% (19/32)	5	2

in the myometrium. This is again repeated 2 weeks later, if only Heyman packings are used.

TECHNICALLY UNRESECTABLE CASES

Cancer of the endometrium grows within the uterus and, unlike squamous cell carcinoma of the cervix, does not spread to the parametrium and regional lymphatics. In the Stage III cases the cancer has literally burst out from within the uterus, and the entire pelvis is filled with cancer. There is so much disease that little can be done for these lesions even with the most radical technique. Table IV shows that some patients are cured, but the majority died from uncontrolled disease in the pelvis with or without presence of distant metastases.

External irradiation is used almost entirely. Occasionally if there has been a satisfactory regression of the massive disease, one may use one Heyman packing after either 5,000 or 6,000 rads.

POSTOPERATIVE IRRADIATION

Almost all of the patients treated at M. D. Anderson Hospital had had a hysterectomy performed elsewhere and were then referred to the M. D. Anderson Hospital for postoperative irradiation. It is not often that one gets an informative pathological report concerning the amount of myometrial invasion. If the lesion is very well differentiated and if all information gathered indicates that there is little myometrial infiltration, one uses only vaginal radium to give a surface dose of 7,000 rads in one application. If the lesion is less differentiated and it seems that there is significant depth of infiltration into the myometrium, first 4,000 rads to the

TABLE V
POSTOPERATIVE CARCINOMAS OF
ENDOMETRIUM
1948-1969
Three-Seven Years Status

No. of Pts.	NED	Pelvic Disease Alone or With DM	Vaginal Recurrence	DM and Other Causes
81	62% (51/81)	16% (13/81)	1	16

TABLE VI
VAGINAL RECURRENCE IN CARCINOMA
OF THE ENDOMETRIUM
1948-1969
Three-Seven Years Status

No. of Pts.	Alive NED	Vagina Failure Alone or With Other Sites	Pelvic Dis. Alone or With DM	DM	Other Causes
37	9	7	11	4	6

whole pelvis is given, occasionally 5,000 rads for anaplastic tumors, and then 4,000 or 3,000 rads surface dose is delivered with vaginal radium. Table V shows the results. Of course, there is no way to prove that the patients who did well would not have done well without postoperative irradiation.

VAGINAL RECURRENCES

At least two-thirds of the vaginal recurrences are close to the apex, and the rest are scattered along the vaginal walls or the suburethral areas. Not infrequently such recurrences are the first manifestation of reactivation of the disease. Combination of external irradiation and interstitial gamma-ray therapy or interstitial gamma-ray therapy alone produce a very high rate of control of the vaginal recurrence (Table VI). However, only a few patients are cured; since the apparently isolated recurrence is usually not the only one, recurrences in the pelvis or distant metastases will develop. There is considerable palliation for those patients who eventually died from the disease but with the vagina free from cancer.

MIXED MESODERMAL TUMORS

Table VII shows the results for Groups I and II put together according to modalities of treatment. It shows the percentage of patients with NED at 2 years, which is ample time, because practically all (Concluded on page 287)

TABLE VII
MIXED MESODERMAL SARCOMA OF THE
UTERUS
SURVIVAL AND PELVIC CONTROL
SURGERY ONLY VERSUS PREOPERATIVE
SURGERY
(Groups I and II Only)
March 1944 thru Dec. 1969

	NED (2 yrs)	Pelvic Control
Hysterectomy Alone	2/10	2/10
Irradiation and Hysterectomy	12/23	20/23
Medically Inoperable (Irradiation Only)	5/ 6	6/ 6
Group I Disease confined to corpus uteri		
Group II Extension to cervix, vagina, and/or parametrium		
Group III Extension outside pelvis		

Medical Management Of Carcinoma Of The Endometrium

Medical Oncologist Must Deal With Cases Not Cured By Initial Therapy And Where Recurrences Are Disseminated

By Rita M. Kelley, M.D.

It is obvious from the statements of previous speakers and from the literature that carcinoma of the endometrium is in general well handled by the gynecologists and radiotherapists involved in its primary therapy. Nevertheless, there is a definite minority of women who develop this disease, who are not cured by their initial therapy, and in whom recurrences occur in disseminated fashion inappropriate for further radiotherapy. It is this group of patients with whom the medical oncologists must deal. Carcinoma of the corpus is among the brief list of tumors whose growth pattern can be altered by the administration of pharmacologic doses of hormonal agents which have a role in the normal physiological controls of the host. Thus, endometrial cancer, like breast cancer in the female, is intimately related to the internal hormonal milieu of the woman who develops this lesion.

CONSTITUTIONAL TYPE

It has long been recognized that carcinoma of the corpus develops in females of rather peculiar constitutional type, in whom there has been a background of unopposed estrogen production without the cycling affect of progesterone. This is due to a high incidence of co-existing ovarian pathology such as Stein-Laventhal syndrome, corticostromal hyperplasia, Leydig cell hyperplasia, thecomas, and other ovarian tumors. Largely a disease of the older age group, the patients often give histories of long-

RITA M. KELLEY, M.D., *Acting Chief of Medical Oncology, Massachusetts General Hospital, Boston, Mass.*

Read at the annual Doctor George W. Waterman Cancer Dialogue, May 22, 1974, sponsored by the Rhode Island Division of the American Cancer Society.

ARVIN S. GLICKSMAN, M.D.:

Doctor Rita Kelley is so well known and respected by her colleagues in New England and the rest of the country that she hardly needs a word of introduction. She is a native of Rhode Island, who has ventured, and succeeded, in that metropolis somewhat to the north of us. A distinguished endocrinologist and medical oncologist, she is currently the Acting Chief of Medical Oncology at the Massachusetts General Hospital. Her long list of accomplishments includes membership in the founding group of the American Society of Clinical Oncology, which has grown over the years to almost 1,000 members and has become a forum for important, original oncological observations. She and Doctor Baker first reported the important observations on the use of progestational agents in metastatic endometrial cancer, which she will now discuss with us.

standing obesity, hypertension, infertility, diabetes, menstrual irregularity, and menopause after the age of 50. Younger women who develop this disease also tend to be obese with menstrual abnormalities, hirsutism, and oligomenorrhea sometimes interspersed with menorrhagia. The role of estrogens per se is challenged by those who point to the low incidence of uterine cancer in females treated for recurrent breast cancer with high doses of estrogens for long periods or in normal post-menopausal women on low dose estrogen for menopausal symptoms and osteoporosis. One could postulate that the influence of continual estrogen stimulation must occur in a woman with a constitutional, probably genetic, predisposition to endometrial cancer, perhaps on the basis of prolonged abnormalities of anterior pituitary.

(Continued on next page)

itary function. Thus, prolonged or abnormal secretion of growth hormone, ACTH, and prolactin could be factors in the patient's obesity, hypertension, and decreased glucose tolerance or frank diabetes. Dysfunction of secretion of gonadotrophins could result in abnormal stimulation of the ovaries and adrenals to account for prolonged unopposed estrogen secretion leading to infertility, late menopause, endometrial hyperplasia, and ultimately carcinoma.

That hyperplasia is a precursor in the genetically predisposed female is well accepted, as is the demonstration that progression from hyperplasia to carcinoma is related to estrogen. Abnormal DNA distribution and aneuploidy, a state in which chromosome count varies either above or below the normal diploid count of 46 chromosomes, are thought to be related to *in situ* changes and cancer, suggesting that chromosome instability is involved in the progression from hyperplasia to cancer. It is estimated that about 10 per cent of females with untreated adenomatous hyperplasia will progress to carcinoma.

Recent enzyme studies of normal, hyperplastic, and neoplastic endometrial tissue suggest that a biochemical relationship exists between hyperplasia and carcinoma of the endometrium. Studies of lactate dehydrogenase and its subunits by starch-gel electrophoretic techniques have shown a four-fold increase in this enzyme in hyperplastic endometrium, when compared with controls of normal endometrium in the proliferative phase. Cases of frank carcinoma showed even higher values, particularly of the LDH subunit labeled M. In rat uterus, estrogens preferentially induce the synthesis of M type subunits of LDH. Such information is not available for human uterine tissue, but these findings imply that similarities in LDH patterns between hyperplasia and cancer might be the result of prolonged endogenous stimulation by estrogen.

HORMONAL THERAPY

The evidence of subtle hormonal abnormalities in women with endometrial carcinoma plus the characteristics of these tumors themselves were the motivating factors leading to a trial of progestogens in disseminated endometrial carcinoma. The tumors are often well differentiated histologically, bearing a marked resemblance to their parent tissue and sometimes demonstrating normal secretory responses to the presence of progesterone. It was logical to attempt to alter the progression of these tumors by using the agent which normally leads to the maturation of endometrial tissue. The development of

potent long acting agents with little or no toxicity has made this form of therapy extremely practical and well tolerated. Many hundreds of patients have now been treated for palliation, and criteria for selection of patients and predictability of response are well defined. The types of patients demonstrating the most favorable objective responses are those with a long free interval between the primary tumor and its first metastasis, suggesting considerable host resistance or immunocompetence and those with a histologic pattern of well differentiated carcinoma or adenoacanthoma.

In most series of patients from 30 to 35 per cent of those treated with substantial doses of progestational agents have shown objective regression of measurable lesions. Another 5 to 10 per cent have shown stability of their lesions with failure to progress for considerable periods of time. Thus, from 35 to 40 per cent may show some measure of objective benefit. Many patients showing no measurable regression often enjoy sustained periods of subjective relief of pain and general sense of well-being. Many of these responses, particularly those in pulmonary disease, may be maintained for prolonged periods with osseous, hepatic, intraabdominal, and pelvic metastases also showing excellent regression, particularly if previously untreated by radiotherapy. In all series those patients showing objective regression outlive the therapeutic failures by many months to several years. This does not mean, however, that life is being prolonged by this type of therapy, but rather that the patient who responds is the one with the rather leisurely tumor, while those with more aggressive tumors fail to respond and die more rapidly. In individual cases, however, one cannot deny that life must have been considerably prolonged. In Reifstein's² series of over 300 patients treated with hydroxyprogesterone caproate responders survived four times as long as non-responders.

Three potent agents are now available for achieving such results: 17 alpha-hydroxyprogesterone caproate or Delalutin,[®] medroxyprogesterone or Provera,[®] and megestrol or Megace.[®] Doses of Delalutin[®] in the range of 1-2 grams weekly may achieve results in pulmonary metastases and primary untreated lesions, while doses of 3-5 grams weekly will be necessary for osseous, pelvic, and intraabdominal recurrences. Depo-provera[®] in doses of 400-800 mg three times a week for the first month, then once a week for the second month with maintenance on the same dose monthly, have been associated with regressions. Megace[®] in doses of 160 mg daily is also effective, but recent word of

mouth reports are said to show that this agent statistically is somewhat less effective than the other two. Toxicity is minimal, with fluid retention of minor degree the most common one. Therapy should be continued as long as the patient is in remission.

The mechanism of action of progesterones in endometrial cancer has not been precisely defined. Histologic studies of lesions before and after exposure to the agents show acanthomatous or secretory conversion with maturation of hyperplastic cells progressing to flattening, atrophy and necrosis. These changes support the initial concept of the possibility of causing tumor tissue to differentiate and mature under the influence of the progestogen. It is logical to postulate that the agents work via a pituitary route, particularly in view of the possibility of genetic pituitary dysfunction in these patients. However, investigation of a central effect via the pituitary has resulted in equivocal findings. Elevated levels of LH have been reported in some patients with varying degrees of suppression by progestogens. Large doses of medroxyprogesterone invariably lead to marked suppression of LH and FSH,³ but this does not necessarily suggest a mechanism of action. Evidence for a local effect is somewhat more convincing than that for a central effect. The same sequence of induction for secretory type change to atrophy to replacement of glands in stroma by fibrous tissue can be demonstrated by injection of progestational agents directly into vaginal implants or into the uterine cavity. After several such injections, viable tumor has been absent from hysterectomy specimens.

Additional evidence for a local effect emerges from the laboratory. Uterine cancer tissue was grown in culture with various hormones incorporated in the medium. Those containing estrogen and androgen at the end of the first week showed little difference from controls containing no hormones. Those containing high concentrations of progesterone, however, showed nearly total necrosis. In studies of tumors of varying degrees of differentiation in organ culture, it has been demonstrated that the incorporation of estrogen in the medium leads to dedifferentiation, an effect which can be neutralized by adding medroxyprogesterone simultaneously.

Studies on nucleic acid synthesis by endometrial cancer in short-term incubation experiments show that the addition of progesterone to the medium reduces the synthesis of both DNA and RNA. Similar effects have been demonstrated in curettage specimens before and after progesterone therapy. Such studies strongly suggest that the effect of progestogens on endometrial cancer is directly on nu-

cleic acid synthesis within the cells and lead to postulation of receptor sites for progestogens on tumor cell surface. One can envision utilization of short-term incubation procedures as a quantitative way of predicting hormonal responsiveness of tumors.

CHEMOTHERAPY

For those patients who have highly undifferentiated lesions autonomous from the start, who would not be expected to respond to the normal controlling factors of endometrial function, the use of progestational agents will be disappointing. In these patients and in those who fail after initial response to hormonal therapy, trials of chemotherapeutic agents may be given. However, the response of this tumor to chemotherapy has not been gratifying. Cytoxan,[®] fluorouracil, and methotrexate given in single drug trials have shown transient responses. Adriamycin has recently been reported to have induced three responses in other patients. The degree and duration of these responses is not clear from the report. There have not been carefully randomized trials of chemotherapeutic agents, nor have there been trials of combined agents similar to those going on in breast cancer or of progesterone combined with chemotherapy on any significant scale. Since breast cancer occasionally does very well on combination chemotherapy, it is logical to assume that endometrial cancer might also respond, and trials of combined therapy should be pushed. However, since many of these patients have had heavy pelvic irradiation, bone marrow reserve will be narrow, and patients will have to be observed carefully for irreversible marrow depression. Poorly differentiated or anaplastic carcinoma of the endometrium remains a lethal disease when it spreads beyond the local scene. As newer agents evolve, we can hope that some of them will demonstrate effectiveness against this lesion.

In the meantime, increasing knowledge of the patient at high risk of endometrial cancer and identification of the pre-malignant lesion should allow one to utilize diagnostic techniques which will ultimately eliminate endometrial cancer or at least identify it early enough so that palliative measures become unnecessary.

REFERENCES

- ¹Fottrell PF, Spellman CM, O'Dwyer EM: Elevated levels of endometrial lactate dehydrogenase in hyperplasia and carcinoma of human endometrium. *Cancer Res* 34:979-80, May 74
- ²Reifenstein EC Jr: Hydroxyprogesterone caproate therapy in advanced endometrial cancer. *Cancer* 27: 485-502, Mar 71
- ³Anderson DG: The possible mechanisms of action of progestins on endometrial adenocarcinoma. *Am J Obstet Gynecol* 113: 195-211, 15 May 72



Implications Of Drug Reactions-- Recognition, Incidence And Prevention

Recent Unjustified Extrapolations Of Mortality, Morbidity, And Cost Have Been Extended To The Entire Hospital Population.

By James W. Cooper, Jr., Ph.D.

While drugs are "remarkably nontoxic" medication therapy is not an entirely safe experiment. The prevalence of overt drug-related morbidity and mortality is a function of both extensive drug usage and intrinsic toxic potential of single or combined drugs.¹ Unfortunately, a lack of understanding of drug reactions has recently brought about unjustified extrapolations of mortality, morbidity, and cost figures extended to the entire hospital population. Accordingly, many editorials and special articles have appeared attempting to place drug reactions in proper perspective.¹⁻⁵ This paper is a review of the types of reactions, their incidence, drugs and related symptomatology, factors in drug reactions, and obstacles to their recognition, as well as methods of recognizing and reducing the incidence of drug reactions and interactions. This effort hopefully will increase objectivity and the capability of recognizing and effectively dealing with overt and covert drug reactions.

The World Health Organization (WHO) definition of an adverse drug reaction is a drug effect "which is noxious and unintended and which occurs at doses used in man for prophylaxis, diagnosis or therapy."⁶ Another much more general definition states that adverse drug reaction includes all un-

wanted consequences of drug administration.⁷ The latter definition is broader in that it embraces drug abuse, misuse, noncompliance, and therapeutic failure. Types of drug reactions with identifiable mechanisms include immunologic or allergic (5-15 per cent and pharmacologic (70-90 per cent),⁷⁻⁹ as subdivided into idiosyncrasy (extremely varied susceptibility to pharmacologic action), side effects (pharmacologic responses other than intended therapeutic objective), and drug interactions (altered pharmacologic response not attributable to a single agent), which may be manifested as idiosyncratic, toxic, diminished or side effect.

INCIDENCE

Any comparison of incidences of ADRs from different studies or specific areas within the health care system (inpatient vs. outpatient) is difficult because uniformity is lacking in: 1. definitions of ADRs, 2. Criteria for patient selection, 3. patterns of drug utilization, 4. Persons screening and documenting ADRs in the population (nurse monitor, primary or other physician, clinical pharmacist or pharmacologist), 5. service areas observed, 6. suitable controls, and 7. variations in methods for compiling the data. Table I illustrates this lack of uniformity for typical incidences reported in various areas.

Most inpatient studies have been focused on medical services in university-affiliated teaching hospitals, where there seems to be a considerable range of patients experiencing adverse reactions. One study,¹⁰ where apparently fairly stringent criteria for ADRs were applied, revealed a lower incidence;

JAMES W. COOPER, JR., Ph.D., *St. Joseph's Hospital and College of Pharmacy, University of Rhode Island.*

This is one of a series of papers supported by the Continuing Education Program of the Rhode Island Health Science Education Council. The work reported was also supported in part by RIHSEC.

TABLE I
ADVERSE DRUG REACTION STUDIES

Authors	% Incidence	% of Drug Exposure	# of Drugs Utilized	# of Patients	Observed; Confirmed by	Service
I. Inpatient						
A. Miller ⁸	28	5.5	?	11,526	Pharmacist or nurse monitor; physician primary or attending confirms	Medical
B. Gray, et al ⁹	24.4	18.5	?	86	Physician other than	Medical
	Period I 25.0	10.7	?	84	primary or attending detects and confirms	
C. Wang & Terry ¹⁰	1.5	?	?	8,291	Nurse monitor; physician	All services
II. Outpatient						
A. Meleny & Fraser ¹¹	36	?	9.9	749	Primary physician	Outpatient
B. Stewart & Cluff ¹²	51	?	6.2	75	Pharmacist history from patient; physician	Outpatient
III. ADR Causing or Contributing to Admission						
A. Smidt ¹³	0.3	?	?	9,104	Physician	All services
B. Caranasos, et al ¹⁴	2.9	?	?	6,063	Pharmacist; physician	Medical
C. Hurwitz ¹⁵	2.9	?	?	1,268	Physician	Med-Surg-Psych
D. Miller ¹⁶	3.7	?	?	7,017	Physician	Medical
E. Gray, et al ⁹	7.0	?	?	86	Physician other than	Medical
	Period I Period II 4.8	?	?	84	primary	
F. Frisk ¹⁷	6.0*	?	2.5	184	Pharmacist;	All services
	Hospital I Hospital II 7.4*	?	3.4	258	prysician	

*Percent of population meeting one or more criteria.

however the population was 99 per cent male, and the hospital was classified as a chronic care facility. A recent critical review of many of these studies found that, in those studies meeting stringent criteria, the incidence of drug reaction by service was: medical 6-15 per cent; psychiatric 2-6 per cent; surgical 2-3 percent; and obstetric and gynecological and newborn pediatric 1-2 per cent, each.⁵

In terms of the outpatient population there appears to be a dearth of information (Table 1), due in part to the complexities inherent in assessing the true magnitude of ADRs in the community. Similar difficulties arise when an attempt is made to document the incidence of drug-related admissions to the hospital. One recent study¹⁷ in two small and widely separated communities found that, when all types of drug-related problems (adverse reactions and interactions, covert multiprescriber use, dietary indiscretion, medication noncompliance, and inappropriate therapy or treatment failures) are considered in patients meeting one or more stringent criteria, a drug-related event contributed to one of five admissions. However, intrinsic toxic effects contribu-

ted to only 30 and 39 per cent of detected problems respectively. Misutilization (noncompliance, dietary indiscretions and covert multiprescriber usage) contributed to 64 and 45 per cent of the cases. Therapeutic ineffectiveness or inappropriateness contributed to only 5 and 10 per cent of the cases. In terms of evaluation of ADR reporting, the rigid criteria applied to the classification of 1,200 drug reactions by the Registry of Tissue Reactions to Drugs resulted in classification of 8 per cent causative, 30 per cent probable, 40 per cent possible, and 19 per cent coincidental; in 3 per cent of the cases the drug implicated was found to be not related to the effect seen.¹⁸ On the other hand, it has been estimated that only 25 per cent of fatal reactions and a much lesser percentage of nonfatal reactions are reported.¹⁹ Only glaring types of overt reactions draw attention and are reported. In the study conducted by physicians other than those responsible for the patients' care only one third of the adverse reactions were recognized by the primary care physician.²⁰

(Continued on next page)

TABLE II
DRUG INTERACTION STUDIES

Authors	Levels of Significance (%)					Observed; determined by	Data Base
	No. of Patients	Average No. Drugs per Patient	Potential (or at risk)	Possible (or with signs)	Probable (or significant)		
I. Inpatient							
A. Hospital* Puckett and Visconti ²³	2,422	....	(4.7)	(0.3)	(0.12)	Pharmacist: physician	108 potential interactions
B. Nursing Home** Cooper, et al. ²⁴	530	4.9	23.4	8.7	....	Pharmacist	Ref. 27-28
II. Outpatient							
A. Clinic** Stewart and Cluff ¹²	75	6.2	51.7	....	....	Pharmacist	Not specified
B. At large* Laventurier ²⁵ and Talley	41,996	9.9	7.6	....	....	Pharmacist	Not specified
III. Contributing to Admission							
A. Hospital I* Hospital II* Frisk ¹⁷	184 258	2.5 3.4	.... ....	.... ....	2.7 5.0	Pharmacist; physician	Ref. 27-28

Methods

*Computer

**Manual

The incidence of adverse drug reactions may also be examined by screening for drug-drug interactions. Although an earlier work noted²¹ that 22 per cent of ADRs were due to drug interactions, a re-examination of the data in a larger population with an unspecified drug interaction data base attributed a total of 6.5 per cent of ADRs to drug interactions.²² Lack of uniformity of a drug interaction data base and significance levels seems to be the primary difference between these studies. A summary of drug interaction incidence studies is presented in Table II.²³⁻²⁵

There are a number of reasons why the extent of the role that drug interactions play in adverse reactions may not be fully appreciated.²⁶ These include: 1. lack of specific information on interactions, 2. a tendency to attribute new symptoms during treatment to the underlying disease, 3. a tendency to ascribe many severe drug reactions to the patient's idiosyncratic response to a single drug rather than to a drug-drug interaction, 4. a relative lack of extensive information regarding pharmacokinetic considerations in drug interactions, and 5. the large number of drugs involved in potential drug interactions.

There are currently three excellent secondary references²⁷⁻²⁹ available for the rapid retrieval of specific information from primary references dealing with drug interactions, their significance, mechanism, findings, and management that have appeared within the last two years. Not only do they help to rectify an unfortunate situation in which a magnitude of meaningless charts and tabulations have clouded the issue of drug interactions, but they generally classify interacting drugs which: 1. should not be administered concurrently, 2. when concurrently administered will usually present difficulties, 3. can be administered concurrently if interactive potential is realized and appropriate changes in dosing or method of administration are made, and 4. have been inconclusively shown to interact or about which there is disagreement relating to the significance in human subjects. With the arrival of these convenient data bases, both computerized and manual screening systems have been proposed for use in screening patients for drug interactions.³⁰ With continuing intensive investigation in pharmacokinetics, epidemiology of adverse drug reactions and interactions, and their symptomatology, much more pertinent information will undoubtedly

TABLE III
DRUGS WITH HIGHEST ADVERSE REACTION RATES
(In decreasing order)

I. Inpatient

- | | |
|--|--|
| A. Miller ⁸
(% Exposures with ADR) | Heparin, prednisone, spironalactone, hydrochlorothiazide, digoxin, neomycin furosemide, cephalothin, ampicillin, aminophylline, chlorthalidone, phenobarbital, diazepam, Al and Mg hydroxides, KCl |
| B. Gray, et al. ⁹
(% of all reactions) | Diuretics, digoxin, quinidine, lidocaine, sedatives and tranquilizers, anticholinergics and antacids, antihypertensives steroids, antibiotics, analgesics, X-ray dyes, anticonvulsants |

II. Outpatient

- | | |
|---|--|
| A. Meleney and ¹¹ Fraser
(% of all reactions) | Penicillin, sulfonamides, codeine, tetanus, antitoxin, aspirin, morphine |
| B. Stewart and Cluff ¹²
(% of all reactions) | Aspirin, penicillin, sulfonamides, tetracycline, codeine, pentazocine |

III. Causing or Contributing to Admission

- | | |
|--|---|
| A. Caranasos, et al. ¹³
(% of all reactions) | Aspirin, digoxin, warfarin, hydrochlorothiazide, prednisone, vincristine, norethindrone, furosemide |
| B. Miller ¹⁴
(% of all reactions) | Digoxin, aspirin, prednisone, warfarin, antihypertensives, CNS depressants |

edly be presented in the literature. The studies²¹⁻²² which cited drug interactions as a small portion (7-22 per cent) of adverse reaction did not specify the data base utilized to screen their populations. On the other hand a most recent work¹⁷ which utilized a convenient data base²⁷⁻²⁸ found that 45 and 68 per cent respectively of adverse reactions contributing to admission were due to drug-drug interactions.

A review of the drug interaction incidence studies²³⁻¹⁵ does show some correlation with one of the drugs most frequently cited in adverse reactions, namely digitalis. The most frequent potential interaction noted in community²⁵ (50 per cent), nursing home²⁴ (45 per cent) and hospital²³ (35 per cent) involved the use of digitalis glycoside(s) in combination with a potassium-depleting diuretic. In addition, 72 per cent of those community-at-large patients²⁵ receiving this combination were not on a potassium supplement, and 37 per cent of the nursing home population using daily digitalis and potassium-wasting diuretics were on neither potassium supplement nor potassium-sparing diuretics, nor were they having any routine electrolyte testing performed. In light of one study³¹ which found that 10 per cent of patients taking digitalis alone showed symptoms of toxicity and that, when a potassium-depleting diuretic was added to the regimen, this incidence increased by 17 to 35 per cent of patients, there does appear to be some evidence that drug interactions may play a more prominent role in adverse reactions than was formerly recognized.

Furthermore, it has been shown that, as the number of drugs increases, the number of adverse reactions to drugs similarly increases.²⁹ Therefore, one of the most significant factors which predisposes any patient to drug reactions is the number of medications (and hence number of potential interactions) being taken by that patient. In the hospital setting a patient simultaneously receiving an average of six to ten drugs can expect as adverse reaction rate of 7 to 10 per cent; as the number of concurrently administered drugs approaches 20, the patient has at least a 40 percent chance of having an adverse reaction to one or more of the drugs.³¹

Drugs with the highest adverse reaction rates⁸ or most commonly implicated in selected inpatient, outpatient, causative, or contributing-to-admission studies are presented in Table III.⁹⁻¹⁴ Despite the different patterns of drug utilization, services covered, ADR definition, and reporting among these studies, there appear to be similarities in terms of drugs most frequently implicated in each area. Another analysis⁵ of five additional studies found that on the medical service digitalis was the most frequently cited drug, while in the general hospital population antibiotics caused more detected drug reactions.

SYSTEMS AND SYMPTOMATOLOGY IN ADR's

On an inpatient basis the majority of ADRs are functional gastrointestinal disturbances (nausea, vomiting, diarrhea), together with cutaneous manifestations (such as rash and itching), headache, drowsiness, insomnia, muscle weakness, tremor.

(Continued on next page)

mulousness, twitching, and drug fever. These symptoms account for up to 70 per cent of ADRs.⁵

In terms of drugs causing or contributing to hospital admissions,^{13, 14} the organ systems most frequently involved were cardiovascular, gastrointestinal, hematologic, neurologic, endocrine-metabolic, and dermatologic.

FACTORS ASSOCIATED WITH ADVERSE DRUG REACTION

Patient Factors. Patients expect primary care providers to prescribe medications. While it is estimated that doctors write prescriptions for an overall 75 per cent of their patients,⁷ the figure is higher among the elderly; 84 per cent of a Medi-Cal population²⁵ and 95 per cent of nursing home patients²⁴ were found to be utilizing medications. Yet even Galen in the Second Century noted that at least 60 per cent of his patients had emotional rather than physical problems.³²

Patients also misuse the medications they demand or receive. Studies have documented that 15 to 93 per cent of all unsupervised patients do not comply with the instructions for use of their medications.³³ Females tend to take more drugs than males; they also have a greater tendency toward drug reaction.^{5, 7, 8-14, 18-19} These trends become more prominent as women age, but the elderly of both sexes tend to have a much higher risk of drug reaction than younger patients. In fact patients over 60-70 years of age suffer an incidence of drug reaction almost double that for adults 30-40 years of age.⁷ In the elderly patient "the efficiency of the individual organ lessens . . . renal function diminishes, enzyme induction is delayed, cell membrane composition and total body salt and water contents are altered, and lean body mass is reduced. Consequently, the elderly differ from younger people in their response to drugs, for their ability to handle drugs by absorption, detoxification, and excretion is naturally affected. Not surprisingly, therefore, iatrogenic disease related to drugs is very common."³⁴

Since multiple drug therapy in itself predisposes to adverse reaction and multiple medication usage may often be unavoidable in hypertensive-cardiovascular-endocrine, infectious, and psychiatric problems, the incidence of these drug-related problems is consequently greater in the geriatric population.

While drugs are intended to affect various pathologic states, the disease and its preferred treatment can also affect drug response. Diseases

that may particularly predispose to drug reactions are those that affect the absorption, distribution, metabolism, and excretion of drugs, e.g. congestive heart failure, and hepatic and renal disease.

Genetic and hereditary influences also play a role in predisposition to drug reactions. Many peoples of Mediterranean ancestry show an increased susceptibility to hemolytic anemia when exposed to drugs with redox potential, due to an inherited deficiency of glucose-6-phosphate dehydrogenase. Inherited differences in metabolism have been shown for isoniazid, succinylcholine, hydralazine, diphenylhydantoin, nitrites, allopurinol, phenacetin, phenylbutazone, antipyrine, and the coumarin anticoagulants, all of which display well-known adverse reactions.³⁵

The atopic individual appears to be more likely to develop hypersensitivity reactions to medications.

Patients often take medications prescribed by more than one physician. One study¹² revealed that 43 per cent of outpatients were taking drugs from multiple prescribers. Recent research¹⁷ indicated that up to two per cent of admissions to two small community hospitals could be attributed to covert multiprescriber involvement. The obvious problem is how to coordinate therapy when the incidence of multiple prescribers appears to be so prevalent in the community. A recent paper has focused on the many types of actual problems that have occurred when prescription information is not rapidly and reliably collated and transferred with patients as they move within the health care "system."³⁶ One solution to the problem lies in the use of patient medication profiles by the pharmacist, a practice that is required by the states of New Jersey and Washington. Similar legislation is pending in the legislature of 15 other states.

Those patients who have a history of adverse reaction to drugs are also more likely to develop further reactions to the same or related medications. For instance, the patient who demonstrates an allergic response to a sulfonamide antibacterial may be prone to react when exposed to medications that share the sulfamyl characteristic, e.g. thiazide antihypertensives and sulfonylurea hypoglycemics). On the other hand, while upwards of half of a patient population¹² give a history of a drug reaction in terms of less severe complaints (headache, neusea, and vomiting), many individuals who are not even taking medications may give a history of complaints that are not amenable to objective documentation.

One study³⁷ of "healthy" individuals (not on medications) revealed that 81 per cent had symptoms which might be considered to represent adverse drug reactions. Another investigator³⁸ reported symptomatic complaints in 13 per cent of patients and 58 per cent of healthy volunteers taking placebos.

Pharmaceutical Industry Factors. The "detailing" of an ever increasing number of prescription drugs to prescribers and the advertising of over-the-counter (OTC) drugs to the public has undoubtedly had an influence on the prescribing and utilization patterns of medications in the community. Several leading companies are beginning to attempt of their own accord or by Federal Drug Administration mandate to correct many of the misleading but convincing claims that undoubtedly increase sales volume.

Physician Factors. In the push-pull relationship of the doctor and patient the favorable response gained by writing a prescription for a medication that usually makes the patient get better tends to set the pattern for the procedure for many or any ills, some of which may not successfully be treated by the medication in question.

Failure to use therapeutic objectives and parameters to assess the attainment of objectives are further factors contributing to adverse reactions.⁷ In the absence of a therapeutic endpoint a toxic endpoint is often the result. Conversely, the apparent ineffectiveness of therapy cannot be gauged without consideration of objectives and suitable means for determining whether these objectives were attained.

Physician-Pharmacist Factors. Even if all health care practitioners were totally aware of the nuances of the pharmacology and pharmacokinetics of all the medications a patient is supposedly using, the prevention of adverse drug reactions is hampered by one fact: we usually have an incomplete medication history of the patient. A complete medication record would include all chronic disease states, prescription and OTC drugs, the patient's compliance with therapeutic direction, notes on the effectiveness of therapy, and documented problems that have occurred.

OBSTACLES TO RECOGNITION

Obstacles to the recognition of ADRs reportedly include a low degree of suspicion⁷ on the part of the prescriber, who is naturally reluctant to believe that his therapeutic interventions may have compounded the patient's problem. The data base of knowledge of the clinical pharmacology and

toxicology of the drugs may be limited. On the other hand where does the blame for an ADR belong? Did the patient misuse the drug or use other agents for recreation and relaxation? It is reported that many more deaths occur from alcohol, suicide, and accidental poisoning than from "therapeutic disadvantages."³⁹ Did the manufacturer not disclose possible adverse effects of the drug? Or did the pharmacist or physician not take the time to investigate a potential problem? Was the drug effect ambiguous at best? The recognition of drug reactions is often difficult, as the patient may be taking many drugs and the effect may not be unequivocally attributable to any one drug, nor may it appear immediately (e.g. vaginal adenocarcinoma in offspring of women taking diethyl stilbestrol for threatened abortion).

As concluded in a recent review⁵: "It is not clear how much of the problem results from inept prescribing . . . how much is preventable either by decreasing such prescribing, or by educating doctors and patients about drug-drug interactions, drug-disease interactions, and scrupulous adherence to directions. Lack of such information is the *greatest handicap* to a proper understanding of the subject."

METHODS FOR RECOGNIZING AND REDUCING INCIDENCE

A growing number of dedicated community and hospital pharmacists consider it their professional responsibility to take and make available the results of drug histories to appropriate health team colleagues. Unfortunately, this is not yet an accepted professional standard. The concept of rapid and reliable collection and transferral of such information is illustrated in Figure 1. This should ideally be an essential component of a drug efficacy and adverse experience reporting and prevention system. Efforts such as the Boston Collaborative Drug Surveillance System must be expanded to include all aspects of drug-related problems and types of hospitals, services, and health care areas before we can get an accurate picture of the magnitude of drug-related problems in the community, let alone of how to attempt solutions to these problems. Interim solutions appear to center on research concerning reasons why people take drugs, more complete data on drug use, educational efforts based on the results of analysis of scientifically complete and valid data, and assessment of the efficacy of

(Continued on next page)

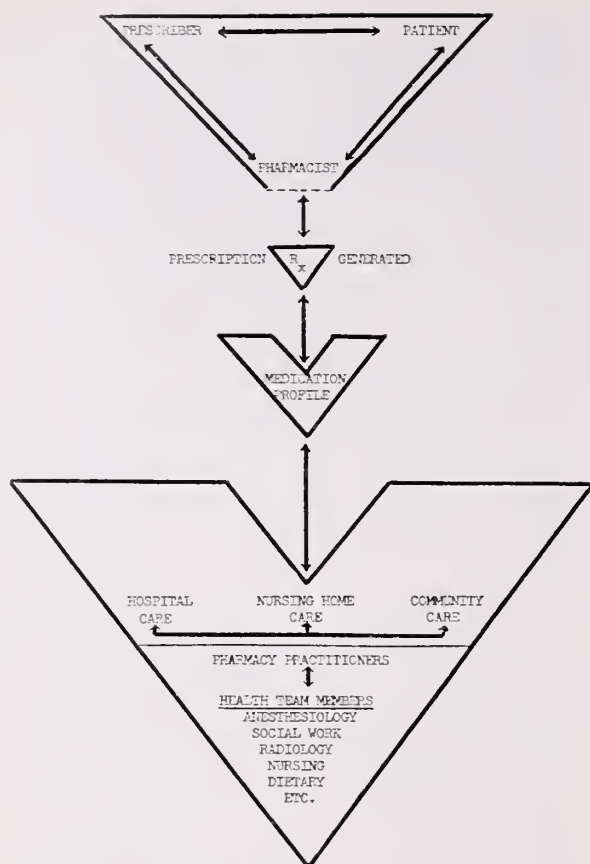


Figure 1. Patient Medication Profile Links Health Care Team Practitioners.

these educational efforts. A conceptualization of these continued competence efforts has been proposed and tested.⁴⁰

In an immediate sense a drug information center* (manned by a specially trained pharmacist) can help to identify problems, assist in patient and health care practitioner education, and provide current and objective evaluations of the drug literature and claims. Pharmacy education is undergoing a change in emphasis from a product to a patient orientation. In both graduate and post-graduate educational programs a significant behavioral objective is the ability to predict, detect, and report drug reactions and efficacy. Community pharmacists in the Spokane area are engaged in a project specifically designed to detect potential and prevent actual drug-related problems. Computerized drug utilization reviews are being conducted by third party groups in numerous areas and states. Specific manual and computerized projects aimed at reduction of drug-

related problems in the community-at-large are under way in Nampa, Idaho; South County, Rhode Island; Charleston, South Carolina; and Toronto, Ontario. Only by way of team commitment to open and maintain communications concerning drug usage will we be able to utilize medications most effectively.

Those drugs with a high intrinsic risk should have very specific therapeutic objectives and parameters by which to assess efficacy and prevent toxicity.⁴¹ In the case of digoxin we have convincing recent evidence from the Boston area that obtaining frequent digoxin serum levels does reduce the incidence of digitalis toxicity. A simple method is the use of a convenient nomogram⁴² which makes use of serum creatinine, lean/fat ratio, and body weight to predict digoxin serum levels and toxicity risks. (Similar nomograms are available for dosing kanamycin and gentamicin by renal function.⁴²) If the patient is also taking a potassium depleting or retaining diuretic or supplement, periodic serum potassium levels should be determined to prevent *both* hypo- and hyperkalemic states. In addition to the previously mentioned risk of pushing digoxin for inappropriate indications, the question also arises "Do patients require digoxin for the rest of their lives?" In a group of 53 patients taking maintenance digoxin, treatment was successfully withdrawn in 48 cases (90 per cent). In another group of 11 patients who showed toxic digitalis effects digoxin was stopped permanently.⁴³ Findings such as these raise serious questions regarding the validity of the dictum "Once digitalis, always digitalis."

For other drugs with high risk potential (e.g. quinidine, procainamide, lidocaine, salicylate, lithium, diphenylhydantoin) serum levels serve a dual purpose: to determine whether a therapeutic level has been attained and whether toxicity is imminent.

It is a key pharmacokinetic consideration that, any time a maintenance dosage change is made in the absence of a bolus or loading dose, the peak effects will not become evident for five to six half-lives ($t_{1/2}$) of the drug. In the case of digoxin, for instance, which has a half-life of approximately 1.5 days in patients under 60 to 70 and up to three days in older patients (with diminished creatinine clearances), a peak effect would not be seen for eight to 18 days after the change if the dose were given on the half-life

(Continued on page 287)

*The College of Pharmacy, University of Rhode Island Drug Information Service may be reached at 521-5055, ext. 313 — Dr. R. J. Moleski, Director

Quietly on January 4, 1975, President Gerald R. Ford signed the National Health Planning and Resources Development Act of 1974. While the Medical Profession has been largely unaware of the existence of this new legislation, it may well be the most significant legislation affecting medical care since the enactment of the Medicare and Medicaid amendments to the Social Security Act. It has been described as another iceberg floating in from Washington like Medicare, Medicaid, PSRO and HMO. This legislation in effect wraps up in one package three former federal health programs: Comprehensive Health Planning (CHP), Regional Medical Programs (RMP), and Hill-Burton.

The law provides for the establishment of three entities: 1. Private non-profit or public Health Systems Agencies, 2. a State Health Planning and Development Agency at the state level, and 3. A Statewide Health Coordinating Council at the State level.

The Health Systems Agencies (HSAs) are designed to: 1. improve the health of residents of their areas, 2. increase the accessibility, acceptability, continuity, and quality of health services, 3. restrain increases in the cost of providing health services, 4. prevent unnecessary duplication of health resources. The HSAs are to be supervised by a governing body, more than half of which shall be consumers and the remainder providers. Each HSA is to prepare a health systems plan and all annual implementation plans for its area. It is also responsible for giving approval or disapproval to applications for federal funds for health programs within the area.

The Health Planning and Development Agencies (State Agencies) are established for the purpose of conducting overall health planning for the state, integrating the plans of local HSAs which require some state government activity and will also administer a Certificate of Need program which is mandated by the new law.

Finally, the state agency is to be advised by a Statewide Health Coordinating Council (SHCC) which must contain a majority of consumers. Sixty per cent of its members must be appointed from the state's health systems agencies.

The law provides for a continuation of the health facilities construction program, but linked to the

new planning process. Grants, loans, and loan guarantees are available for modernization of medical facilities, construction of ambulatory facilities, and construction or conversion of inpatient facilities. Before any of these funds can be awarded, however, the state agency must send to the Secretary of HEW a state medical facilities plan which has been approved by the statewide health coordinating Council.

Through the intercession of Senator Claiborne Pell, special flexibility in implementation has been provided for states such as Rhode Island which have no county or municipal health institutions or departments, and which have maintained a health planning system which complies with the purposes of the Act.

In making his special plea, Senator Pell described the nonprofit health planning network operating in Rhode Island consisting of the Health Planning Council, Inc. (HPC), the Rhode Island Health Science Education Council (RIHSEC), and Rhode Island Health Services Research, Inc. (SEARCH).

As a result of this special status, Rhode Island will have no Health System Agencies (HSAs). This is pursuant to a request of Governor Philip Noel as provided in this special section of the law, that Rhode Island be exempt from establishing such HSAs. The approximately \$1.5 million for training purposes which would be available in Rhode Island for these agencies will instead go directly to the State Agency. Governor Noel has furthermore designated the State Health Department as the State Health Planning and Development Agency.

At the suggestion of Senator Pell a committee on Health Legislation has been convened under the sponsorship of the Governor's office to recommend how the functions of a Health Systems Agency can best be implemented in Rhode Island. The committee has representation from the Governor's office, the State Department of Health, the State Budget Office, the statewide planning program, the HPC, SEARCH, RIHSEC, Blue Cross, and the state Hospital Association. The Rhode Island Medical Society is now a participant.

The most sensible feature of the new law appears to be the elimination of overlapping jurisdictions among CHP, RMP, and Hill-Burton. Its full impact, however, will not be evident until the regula-

(Concluded on next page)

tions for implementation are drawn. One recent paper on the subject was appropriately titled: "Health Care Planning Gets Muscle." The involvement of government in medical practice is not only implicit in the law, but explicit in the statements of at least one government official. According to Eugene J. Rubel, director of the new HEW Bureau of Health Planning and Resources development: "We are now very definitely intervening in the private practice of medicine and in the organization

and operation of health care institutions, and the reason is dollars. More and more of the federal budget is going toward health care expenditures. As inflation has eaten up all of the benefits of Medicare, there's been an overwhelming need to say that government can no longer play the passive role of simply paying the bills."

The federal government is now in a powerful position to call the tune, and in Rhode Island the State Health Department will be a vocal partner.



Will You Support The Rhode Island Professional Standards Review Organization, Inc.?

OVER 900 PHYSICIANS HAVE JOINED!!

The officers and the Board of Directors of R.I.P.S.R.O., Inc. have applied to the Secretary of Health, Education and Welfare for designation as the PSRO for the Rhode Island area and have received a planning grant to qualify as a conditionally designated PSRO. Under the law, a "substantial portion" of all physicians in the area must be members of R.I.P.S.R.O.

It is our hope that you will agree with the approach of the officers and directors of R.I.P.S.R.O., a peer review organization controlled and directed by a committee of licensed physicians. Even though you may not agree with the basic concept of PSRO itself, we hope that you will give your support by requesting membership in R.I.P.S.R.O. There are no dues, fees or other monetary obligations involved.

Dr. Alton M. Paull
President — R.I.P.S.R.O., Inc.

Dr. Alton M. Paull, President
R.I.P.S.R.O., Inc.
106 Francis Street
Providence, Rhode Island 02903

Dear Doctor Paull:

I agree with the general approach of the officers and Board of Directors of R.I.P.S.R.O., Inc., a physician controlled and directed organization, and wish to support that organization as long as it shall be controlled by the physicians of Rhode Island.

I hereby accept membership in R.I.P.S.R.O., Inc.

.....
Signature

.....
Address

.....
Name Printed

.....
Date

MAL- PRACTICE QUESTIONS ???

**Depend on
Starkweather & Shepley
for the answers
and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.

ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

155 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900



Subdural Hematoma In Children

By Thomas C. McOsker, M.D.

Head injury is a common disorder in children. A substantial number of children are admitted to hospitals each year for observation because of fear of intracranial complications. Some are obviously seriously damaged with complicated skull fractures and brain lacerations. These patients may have some subdural bleeding as a part of the overall skull and brain damage but the subdural is merely a complicating part of the overall picture. It has long been felt by neurosurgeons that acute and chronic subdural hematomas are not seen in childhood to any great degree. They are seen commonly in infancy and much has been written about this. Gurdjian, in his book "Head Injuries" stated that subdural hematoma occurs in 5 per cent of head injuries but that it is more common in infants than children. Matson reported 537 cases of subdural hematomas between 1937 and 1966. Of these only 24 occurred in the group older than 24 months.

The records at Rhode Island Hospital from the year 1966 to 1973 were searched. During those years there were a little more than 1,000 admissions a year to the neurosurgical service. By consensus conjecture, since exact figures are not available, about 100 of these a year were children with head injuries so that about 800 admissions aged 2 to 14 were involved in this search.

CASE REPORTS

Carl M, aged 12, was knocked from a horse with temporary unconsciousness on 8-10-70. He developed diplopia, then papilledema. Echo, angiogram

and electroencephalogram were abnormal and the scan was suggestive of subdural hematoma. On 8-14 50cc of dark blood was evacuated from the subdural space and he did well.

Ronald F, aged 14, was struck by an auto and admitted with dilated pupils but roving eyes. Emergency operation showed a large right subdural hematoma. There was however, also brain contusion and although he recovered he later showed poor memory, behavior problems and had seizures treated with anileptics.

Alfredo S, aged 10, was admitted with a history of having had a subdural hematoma treated with craniotomy at age 8 at another hospital. However, his original injury occurred at 7 or 8 months of age. He was retarded, had a spastic left hemiparesis. No operation was done at his admission to Rhode Island Hospital.

There were however, no subdural hematomas from a proximate injury diagnosed in the age group 3 to 11.

CONCLUSION

Subdural hematomas are very uncommon in the usual head injury sustained by an otherwise normal prepuberty child who does not have an overwhelming head injury.

REFERENCES

- ¹Gurdjian ES, Webster JE: *Head Injuries*. Boston, Little, Brown and Company, 1958
- ²Matson DD: *Neurosurgery of Infancy and Childhood*. Springfield, Charles C. Thomas, 1969. Text edition



PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in

INDEX MEDICUS giving author (co-authors up to three; et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.

CANCER OF THE ENDOMETRIUM

(Continued from page 266)

gestrone which reduced the mean DNA synthesis to 46 per cent and the RNA synthesis to 39 per cent of control values. Among a series of endometrial cancers treated with high dose progesterone about 75 per cent showed decreased survival in organ cultures and a significantly reduced DNA synthesis in vitro and in vivo.

LH secretion in patients with endometrial carcinoma is 7 times greater than the normal population.¹⁶ This can be restored to normal with the administration of 17 alpha hydroxy-progesterone acetate to these patients. These changes, that is, the elevation of LH, cannot be demonstrated in women with ovarian or breast cancer.

The use of contraceptive pills containing estrogen and progesterone has been said to offer protection against carcinoma of the endometrium. There are at least 3 known cases of people who have developed endometrial carcinoma while on sequential contraceptives. Perhaps this medication does not give the same degree of protection as combined medication for 21 days does, especially since our present concept a minimum dose of estrogen is given.

The mechanism of action so far as the progestins are concerned has not been elucidated. It is not known whether they have a suppressant effect, whether there is a change in sex steroid components or sex steroid support of the tumor, or whether there is direct action upon the neoplastic cell itself. It has been noted that, if the vaginal smear shows that the continuous estrogenic effect has been suppressed by progesterone, there is usually uninterrupted tumor progression. It also has been postulated that progestins seem to work better if there has been no prior irradiation. Kistner¹⁷ makes the point that, when there is remission with one agent followed by eventual failure, if one then switches to another progestin, a further remission may be produced. The main drugs used are 17 alpha hydroxyprogesterone acetate (Delalutin®) intramuscular in doses of 3,000 to 5,000 mg weekly. This is continued indefinitely until the patient's tumor escapes. With the use of progesteronal agents it is rare that the patient will show clinical remission in less than 8 to 12 weeks of therapy. Depo-Provera® (medroxy progesterone acetate) in daily doses of 400 mg intramuscular until 15 or 30 grams are given over a 50 to 80 day period seems equally successful. The maintenance dose is then dropped to 1,250 mg per week. This, too, is continued until the patient fails to show a response. Megestrol ace-

tate (Megace®) given in doses of 20 mg 4 times a day (17 alpha acetoxyprogesterone) seems to be equally as good as other progestins. It has the great advantage of being an efficient oral medication. In some instances as much as 320 mg a day has been used for long periods. All in all, most observers reported a response of about 30-35 per cent to any of the above-mentioned progestins — the average response lasting anywhere from 12 to 20 months.

Lewis¹⁸ makes the point that, if progesterone produces remission followed by an escape of tumor and advance of the disease, a switch to alkylating agents may be worthwhile. This sometimes can control the cancer for an additional year or two, at which time there is generally marrow failure and one is forced to abandon this mode of therapy. However, if one switches back to a progestin, this may again control the disease. If it does not, it will at least give symptomatic relief to the terminal patient. He also states that progestin, if not used as primary therapy (he quotes 300 cases) but as an adjunct to other therapy, does not affect the final cure rate. In other words, progestin plus hysterectomy, for instance, did not affect the final cure rate.

Progress is being made in understanding the role of hormones among patients with cancer of the
(Concluded on next page)

3 HOME CARE PHYSICIANS

Full time, private practice in metropolitan Providence private homes, senior citizen homes, nursing homes, other home care facilities. \$50,000 to \$70,000 salary agreements or guarantees. Write:

WILLIAM E. REEVES, M.D.
P. O. Box 2346
Providence, R. I. 02906

PRIME OFFICE SPACE FOR LEASE PAWTUCKET OPPOSITE MEMORIAL HOSPITAL

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

CALL ALLIED INVESTMENT
434-2974 or 433-0759

endometrium. Soon it will be possible to apply this knowledge in selecting patients for hormone treatment and will provide a method of monitoring therapy.

DISCUSSION

Despite the fact that these results have been achieved from treatment by unsophisticated techniques, there is still controversy over the best treatment for cancer of the endometrium. It is axiomatic that once a diagnosis is made a plan of treatment must be formulated to give the best results. In a British review on this subject the statement was made that "it appears that in the best hands there is little to choose between the results obtained by hysterectomy with removal of the adnexa, hysterectomy plus pre- or post-operative radiotherapy, vaginal hysterectomy, and irradiation alone." "By each of these treatments," he concludes "the experts appear to be able to produce a 3 out of 4 chance of 5-year apparent cure in the most favorable type of case."¹⁹

By the last statement the author placed an obligation upon the physician to choose the best form of treatment for a given patient. Bichenback²⁰ has decisively demonstrated that radiation therapy alone is inferior to surgery or a combination of surgery and radiation. Few physicians working in the field recommend radical hysterectomy as a routine. Perhaps only about 1 in 5 or 1 in 4 would be suitable for this approach.

However, it is important to have parameters (depth of invasion, site, grading, and cellular morphology) available that will indicate that extra-uterine spread is likely. In these patients treatment in the form of surgery or irradiation should be employed to extend beyond the uterus and to include the pelvic nodes. The patients at risk for spread beyond the uterus are those with involvement of the cervix or lower uterus, grade III lesion, and myometrial invasion beyond 1/4 of the myome-

trium. If tumor spreads to adjacent structures and metastasizes to pelvic glands, the only logical treatment would be one capable of destroying cancer cells in all of these sites. Philosophically speaking, the problem of treatment is as simple as that. This may be impossible in practice, or achieved only at the risk of complications so serious that it would not be justified.

REFERENCES

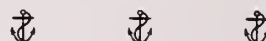
- ¹Randall CL: Adenocarcinoma of the uterus. In Kimbrough RA, editor: *Gynecology*. Philadelphia and Montreal, J. B. Lippincott Company, 1965. P. 331
- ²Gusberg SB: The dysfunctional and the neoplastic: Clinical investigation in the service of patient care in endometrial cancer. *Am J Obstet Gynecol* 116: 175-83, 15 May 73
- ³Frick HC, II, et al.: Carcinoma of the endometrium. *Am J Obstet Gynecol* 115:663-76, 1 Mar 73
- ⁴Lewis GL: Endometrial cancer: Rising incidence, detection and treatment. *J Reprod Med* 10:53-74, Feb 73 (Symposium)
- ⁵Peterson E: Endometrial carcinoma in young women. *Obstet Gynecol* 31:702-7, May 68
- ⁶Lewis BV, Stallworthy JA, Cowdell R: Adenocarcinoma of the body of the uterus. *J Obstet Gynaecol Br Comm* 77:343-8, Apr 70
- ⁷Barber HRK, Brunschwig A: Treatment and results of recurrent cancer of corpus uteri in patients receiving anterior and total pelvic exenteration. 1947-1963. *Cancer* 22:949-55, Nov 68
- ⁸Stander RW: Vaginal metastases following treatment of endometrial cancer. *Am J Obstet Gynecol* 71:776-9, Apr 56
- ⁹McLennan CE: The argument against preoperative radium for endometrial cancer. *Trans Pac Coast Obstet Gynecol Soc* 25:122-31, 1957
- ¹⁰Graham J: The value of preoperative or postoperative treatment by radium for carcinoma of the uterine body. *Surg Gynecol Obstet* 132:855-60, May 71
- ¹¹Gusberg SB: Treatment of invasive cancer of the endometrium. In Barbar HRK, Graber EA, editors: *Gynecological Oncology*. Amsterdam, New York, Excerpta Medical Foundation, (1970). P. 156
- ¹²Lebheartz TB: See Ref. No. 4 (Symposium)
- ¹³Nordqvist S: Hormonal responsiveness of human endometrial carcinoma studied in vitro and in vivo. Lund, Sweden, University of Lund, 1969
- ¹⁴Nordqvist S: Survival and hormonal responsiveness of endometrial carcinoma in organ culture. *Acta Obstet Gynecol Scand* 49:275-83, 1970
- ¹⁵Hausknecht RU, Gusberg SB: Estrogen metabolism in patients at high risk for endometrial carcinoma. *Am J Obstet Gynecol* 105:1161-7, 15 Dec 69
- ¹⁶Sherman AI, Woolf RB: An endocrine basis for endometrial carcinoma. *Am J Obstet Gynecol* 77: 233-42, Feb 59
- ¹⁷Kistner RW: See Ref. No. 4 (Symposium)
- ¹⁸Lewis GL: See Ref. No. 4 (Symposium)
- ¹⁹Bourne AW, Williams LH: *Cancer of the uterine body. Recent Advances in Obstetrics and Gynaecology*. Tenth Edition. Boston, Little, Brown and Company, 1962
- ²⁰Bickenbach W, et al.: Factor analysis of endometrial carcinoma in relation to treatment. *Obstet Gynecol* 29:632-6, May 67

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island

Hopkins 7-8050



RADIATION TREATMENT OF CARCINOMA OF THE ENDOMETRIUM

(Continued from page 270)

of the patients who died within 2 years; pelvic control is also shown. Hysterectomy alone is not nearly as efficient as preoperative irradiation and hysterectomy. The small group treated by irradiation only is quite interesting, having the best results. The numbers are too small for statistical significance, but they point out that mixed mesodermal sarcoma, contrary to the commonly held opinion, is not a radioresistant tumor.

SUMMARY OF CURRENT MANAGEMENT OF ENDOMETRIAL CANCER AT M. D. ANDERSON HOSPITAL

The current policies of treatment are:

1) Small uterine cavity and a well differentiated tumor — hysterectomy only with a wide vaginal cuff.

2) Uterus slightly enlarged and the tumor well differentiated — one radium insertion of 72 hours with a tandem and 7,000 rads surface dose with vaginal ovoids. The hysterectomy is performed 2 to 3 days after removal of the radium system.

3) Disease more advanced, i.e. the uterus moderately enlarged but still well differentiated — 2 Heyman packings or 4,000 rads whole pelvis irradiation and one Heyman packing and hysterectomy. The latter approach would be advisable at most institutions, because the Heyman packing is a disappearing art.

4) A large uterine cavity or an anaplastic tumor — 4,000 rads whole pelvis irradiation is given first, one Heyman packing and hysterectomy.

SUMMARY

Using preoperative irradiation and an extrafascial conservative hysterectomy, the failure rate within the pelvis is low, not only in Stage I but also in Stage II. Presently at the M. D. Anderson Hospital one attempts to adjust the treatment to the volume of cancer, the degree of anaplasticity, and the degree of myometrial invasion.

Patients with medical contraindications for surgery can still be treated efficiently with radical irradiation alone. Mixed mesodermal sarcoma is best treated with irradiation and surgery. If surgery is contraindicated, carefully planned radical irradiation alone is effective.



IMPLICATIONS OF DRUG REACTIONS — RECOGNITION, INCIDENCE, AND PREVENTION

(Continued from page 280)

interval. In addition, the patient with diminished renal function and extended $t_{1/2}$ (three days) would exhibit an average peak blood level approximately twice that of the patient with a shorter $t_{1/2}$ (1.5 days), if the same dose were administered to both patients. While most drugs display linear kinetics of elimination, some drugs (e.g. aspirin and diphenylhydantoin) exhibit non-linear elimination rates. Doubling the dose of these drugs will produce much greater than two-fold increases in plasma concentration. This consideration necessitates the use of small increments when titrating to therapeutic endpoint. On the other end of the time spectrum, when quinidine is initially given at an interval of every two hours (normal renal function) to convert atrial premature contractions, a plateau effect is seen in 10 to 12 hours. If, however, quinidine is initially given every four hours, the maximum serum concentration is not achieved until 48 to 72 hours.⁴⁴ Another less well known aspect of both quinidine and procainamide therapy is that they are both weak organic bases. Alkalinization of the urine by diuretics, antacids, alkaline-ash diet, or bicarbonate tends to cause retention, longer half-life, and potential toxicity. Acidification of the urine by ascorbate, methionine, ammonium chloride, or acid-ash diet tends to cause more rapid excretion and diminished therapeutic levels. In either case, serum levels and urine pH testing can serve as useful parameters for assessing pharmacologic effect and pharmacokinetic explanation for that effect.

SUMMARY

There is little to be gained from adverse reaction studies, except an appreciation of the need to recognize which drugs most commonly cause problems in various circumstances in specific organ systems and what apparently predisposes a patient to an adverse reaction. It can be realized from preliminary studies^{16-17, 34-36} that the patients may contribute to the problem of drug toxicity by their noncompliance, covert multiprescriber usage, or abuse of licit and illicit drugs as much as or more than the intrinsic toxic potential of the drugs implicated. Most of these drugs are time-honored medications which improve both the quality and quantity of life. Much more research in these matters is clearly needed.

(Concluded on next page)

Preventive measures involve a concerted application of the concept of the long-strived for but yet to be achieved "health care team," in which lines of education, communication and responsibility are accepted and promoted to ensure that the intrinsic toxic potential of our relatively "non-toxic drugs" is minimized.

REFERENCES

- ¹Jick H: Drugs—remarkably nontoxic. *N Engl J Med* 291:824-8, 17 Oct 74
- ²Franke DE: Adverse drug reactions in perspective. *Drug Intell Clin Pharm* 8:571, Oct 74
- ³Halberstam MJ: The drug reaction game: Another crisis that isn't. *Prism* 2:30-4, Nov 74
- ⁴Koch-Weser J: Fatal reactions to drug therapy. *N Engl J Med* 291:302-3, 8 Aug 74
- ⁵Karch F, Lasagna L: MIPI—Report on adverse drug reactions in the United States. Washington, D.C., Medicine in the Public Interest, 1974
- ⁶World Health Organization: International drug monitoring—the role of the hospital. *Drug Intell Clin Pharm* 4:101-10, Apr 70
- ⁷Melmon KL: Preventable drug reactions—causes and cures. *N Engl J Med* 284:1361-8, 17 Jun 71
- ⁸Miller RR: Drug surveillance utilizing epidemiologic methods. A report from the Boston Collaborative Drug Surveillance Program. *Am J Hosp Pharm* 30:584-92, Jul 73
- ⁹Gray TK, et al.: Short-term intense surveillance of adverse drug reactions. *J Clin Pharmacol* 13: 61-7, Feb-Mar 73
- ¹⁰Wang RIH, Terry LC: Adverse drug reactions in a veterans administration hospital. *J Clin Pharmacol* 11:14-8, Jan-Feb 71
- ¹¹Meleney HE, Fraser ML: A retrospective study of drug usage and adverse reactions in hospital outpatients. *Drug Inform Bull* 3:124, 1969
- ¹²Stewart RB, Cluff LE: Studies on the epidemiology of adverse drug reactions. VI: Utilization and interactions of prescription and nonprescription drugs in outpatients. *John Hopkins Med J* 129: 319-31, Dec 71
- ¹³Smidt NA, McQueen EG: Adverse reactions to drugs: A comprehensive hospital inpatient survey. *NZ Med J* 76:397-401, Dec 72
- ¹⁴Caranasos GJ, et al.: Drug-induced illness leading to hospitalization. *JAMA* 228:713-7, 6 May 74
- ¹⁵Hurwitz N: Admissions to hospital due to drugs. *Br Med J* 1:539-40, 1 Mar 69
- ¹⁶Miller RR: Hospital admissions due to adverse drug reactions. A report from the Boston Collaborative Drug Surveillance Program. *Arch Intern Med* 134: 219-23, Aug 74
- ¹⁷Frisk PA: M.S. Thesis. University of Rhode Island, 1975
- ¹⁸Irey NS: Diagnoses on drug reactions: The first 1200 cases. Registry of Tissue Reactions to Drugs, Parts I-III. Washington, D.C., American Registry of Pathology, Armed Forces Institute of Pathology, 1968
- ¹⁹Wade OL: Pattern of drug-induced disease in the community. An unsolved enigma. *Brit Med Bull* 26:240-4, Sep 70
- ²⁰Gray TK: Endpoints of therapy: A vital concept in surveillance and drug records. *J Clin Pharmacol* 15:221-4, Apr, pt. 1, 75
- ²¹Borda IT, et al.: Assessment of adverse reactions within a drug surveillance program. *JAMA* 205: 645-7, 26 Aug 68
- ²²Boston Collaborative Drug Surveillance Program: Adverse drug interactions. Editorial. *JAMA* 220: 1238-9, 29 May 72
- ²³Puckett WH Jr, Visconti JA: An epidemiological study of the clinical significance of drug-drug interactions in a private community hospital. *Am J Hosp Pharm* 28:247-53, Apr 71
- ²⁴Cooper JW Jr, et al.: A seven nursing home study. Frequency of potential drug-drug interactions. *J Am Pharm Assoc n.s.* 15:24-7, Jan 75
- ²⁵Laventurier MF, Talley RB: The incidence of drug-drug interactions in a medical population. *Calif Pharm* 20:18, 1972
- ²⁶Melmon KL, Morrelli HF, editors: *Clinical Pharmacology: Basic Principles in Therapeutics*. Riverside, N.J., Macmillan Publishing Company, Inc., 1972
- ²⁷Hansten PD: *Drug Interactions*. Second Edition. Philadelphia, Lea & Febiger, 1973
- ²⁸American Pharmaceutical Association: *Evaluations of drug interactions*. First edition, 1973; Supplements, 1974, 1975
- ²⁹Cohen SN, Armstrong MF: *Drug Interactions—A Handbook for Clinical Use*. Baltimore, Williams and Wilkins, 1974
- ³⁰Fish KH, Cooper WJ Jr: A system for drug-drug interaction detection. *J Am Pharm Assoc* 15:28-31, Jan 75
- ³¹Smith W, et al.: Studies on the epidemiology of adverse drug reactions. V. Clinical factors influencing susceptibility. *Ann Intern Med* 65:629-40, Oct 66
- ³²Shapiro AK: The placebo effect of treatment. *Drug Ther* 1:45-54, Dec 71
- ³³Francke DE, Whitney HA Jr, editors: *Perspectives in Clinical Pharmacy*. Hamilton, Illinois, Drug Intelligence Publication, 1972. P. 45
- ³⁴Hall MRP: Drug therapy in the elderly. *Br Med J* 3:582-4, 15 Sep 73
- ³⁵Reference no. 26. Page 540
- ³⁶Cooper JW, Campbell NA: Community hospital practitioner consultation. In press
- ³⁷Reidenberg MM, Lowenthal DT: Adverse nondrug reactions. *N Engl J Med* 279:678-9, 26 Sep 68
- ³⁸Green DM: Pre-existing conditions, placebo reactions, and "side effects." *Ann Intern Med* 60:255-65, Feb 74
- ³⁹Hewitt D, Milner J: Drug-related deaths in the United States—first decade of an epidemic. *Health Serv Rep* 89:211-18, May-Jun 74
- ⁴⁰Brown CR, Uhl HSM: Mandatory continuing education. Sense or nonsense? *JAMA* 213:1660-8, 7 Sep 70
- ⁴¹Duhme DW, et al.: Reduction of digoxin toxicity associated with measurement of serum levels. A report from the Boston Collaborative Drug Surveillance Program. *Ann Intern Med* 80:516-9, Apr 74
- ⁴²Jelliffe RW, Brooker G: Nomograms for Digoxin, Kanamycin and Gentamicin dosage. Nomograms Business Office, U.S.C. School of Medicine, 2025 Zonal Avenue, Los Angeles, California 90033
- ⁴³Dall JLC: Maintenance digoxin in elderly patients. *Br Med J* 2:705-6, 20 Jun 70
- ⁴⁴Washington University Department of Medicine: *Manual of Medical Therapeutics*. Twenty-first edition, edited by EC Boedeker, JH Dauber. Boston, Little, Brown and Company, 1974. P. 124



In patients with chronic or frequently recurrent urinary tract infections

Bactrim^{T.M.} outperforms ampicillin.

In new multicenter studies a higher percentage of Bactrim-treated patients maintained clear cultures for four, six and eight weeks.

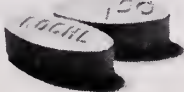
See charts on following page for details of studies.



For chronic cystitis or pyelonephritis evidenced by persistent bacteriuria, frequently recurrent infections or infections associated with urinary tract complications, when infection is due to susceptible organisms.

Bactrim^{T.M.}

(80 mg trimethoprim/400 mg sulfamethoxazole)



Before prescribing, please consult complete product information, a summary of which follows:
INDICATIONS: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris* and *Proteus morganii*.

Note: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections.

The recommended quantitative disc susceptibility method (*Federal Register* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy, "Intermediate susceptibility" also indicates a likely response and "Resistant" that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarthritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

DOSAGE: Not recommended for children under 12. Usual adult dosage: 2 tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.



Roche Laboratories
 Division of Hoffmann-La Roche Inc.
 Nutley, New Jersey 07110

In new multicenter studies
of patients with chronic or frequently
recurrent urinary tract infections

BactrimTM
(80 mg trimethoprim/400 mg sulfamethoxazole)

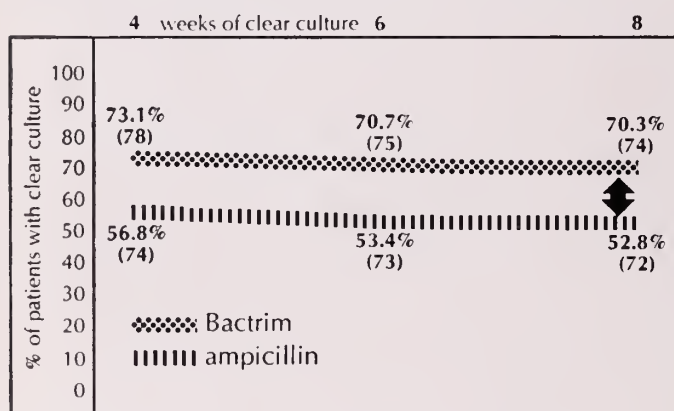
outperforms ampicillin

LIBRARY

APR 23 1976

NEW YORK ACADEMY
OF MEDICINE

Bactrim vs ampicillin. 10-day therapy. 157 patients.



Criterion for clear culture: 1000 or fewer organisms/ml of urine.
Numbers in parentheses: No. of patients evaluated for this time period.

17.5% The Bactrim plus.

Patients maintaining clear cultures for 8 weeks

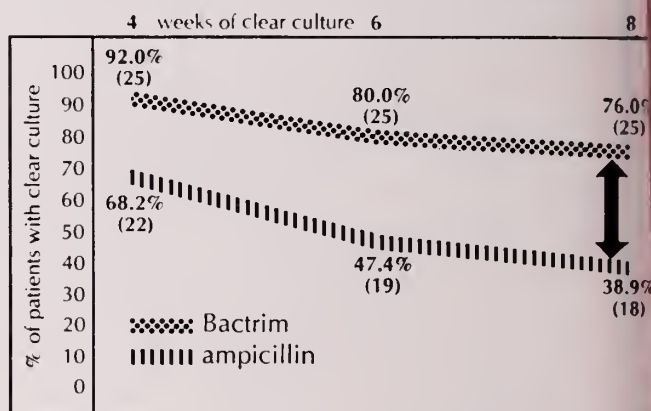
Bactrim: 70.3%

ampicillin: 52.8%

In two multiclinic, double-blind studies of patients with chronic or frequently recurrent urinary tract infections, Bactrim maintained a higher rate of clear cultures than ampicillin. All patients had "significant bacteriuria" (100,000 or more organisms/ml of urine) on two consecutive pretreatment cultures; many had previously undergone multiple treatment programs and/or surgery. Organisms were *E. coli* and *Proteus mirabilis*.

Side effects were relatively mild (e.g., nausea,

Bactrim vs ampicillin. 28-day therapy.* 53 patients.



Criterion for clear culture: 1000 or fewer organisms/ml of urine.
Numbers in parentheses: No. of patients evaluated for this time period.

37.1% The Bactrim plus.

Patients maintaining clear cultures for 8 weeks

Bactrim: 76.0%

ampicillin: 38.9%

vomiting, rash), but more serious side effects can occur with the agents studied. Please consult the manufacturers' product information for all warnings, precautions, contraindications and adverse reactions.

*While the usual therapy regimen for Bactrim is 10 to 14 days, patients with chronic urinary tract infections can be and are treated for substantially longer periods with standard agents such as ampicillin. These studies, therefore, include both 10-day and 28-day courses of therapy. In both studies dosage was one 500-mg ampicillin capsule q.i.d. or two Bactrim tablets b.i.d. plus placebos to make each drug regimen appear identical.

ROCHE

Please see preceding page for summary
of product information.

July 1975

R.I. Medical Journal

Vol. 58 No. 7

BALCONY



Both often



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) may occur following abrupt discontinuation (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Caution in addiction-prone individuals under ca-

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the prescription she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam) 2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

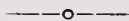
Rhode Island Medical Journal

JULY, 1975

VOLUME 58, No. 7

EDITORIAL STAFF

Editor-in-Chief Seebert J. Goldowsky, M.D.
Managing Editor Timothy B. Norbeck
Ass't Managing Editor Lance D. Taylor
Managing Editor Emeritus John E. Farrell, Sc.D.



John F.W. Gilman, M.D., Chairman	*Charles A. Hall, Jr., M.D.
*John A. Dillon, M.D., Acting Chairman	Robert V. Lewis, M.D.
*Stanley M. Aronson, M.D.	*Peter L. Mathieu, M.D.
*Bertram H. Buxton, Jr., M.D.	*Jay M. Orson, M.D.
Robert P. Davis, M.D.	Henry T. Randall, M.D.
*Herbert Fanger, M.D.	*Guy A. Settipane
Pierre M. Galletti, M.D., Ph.D.	

(*Also Member Publications Committee)

TABLE OF CONTENTS

LYMPHOMAS IN CHILDREN	
Edwin N. Forman, M.D.	303
THE MUTUAL OBLIGATIONS OF THE MEDICAL PROFESSION AND THE PRESS	
Lawrence K. Altman, M.D.	306
BLUE SHIELD — FIFTEEN YEARS	
Arnold Porter, M.D.	309
THE AMBULATORY SURGICAL FACILITY	
Charles L. Hill, M.D.	313
HIRSCH LOEB GORDON, M.D., 1896-1969	
Harry A. Savitz, M.D.	321
EDITORIALS	315
PRESIDENT'S PAGE	291
REPORT OF THE COMMITTEE ON DRUG ABUSE	324
FISKE FUND	317

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.

President's Page

Malpractice — The Patient Pays!!

By Stephen J. Hoye, M.D.

With the inception of the Joint Underwriting Authority of which we have all recently become part, in order to obtain professional liability insurance, it is fully understood that all of us are dissatisfied with the sizes of the premiums!! Very much so — in many cases!! But we had no other choice at the time!!! We should realize that this is a temporary, short-term answer to a serious crisis, and allows us to obtain the necessary insurance to continue to care for our patients while the roots of the problem are being investigated and dissected, and a solution found.

The message that we have to get across to our patients is that these premiums are exorbitant, and as a business cost ultimately will be paid by them. **THE PATIENT PAYS!!** When physicians across the United States protest against skyrocketing insurance premiums, they are acting to protect their patients from unfair "taxation" and rising health care costs.

The medical profession is represented on the Directors Board of the JUA by three practicing physicians, and the entire Board worked long and hard to arrive at an equitable premium structure. So, when we find the rates higher than we had anticipated, just realize that honest men are doing the best they can with the information available and are representing us — the Medical Society — to the fullest extent of their ability!!!

The same applies to the Governor's Commission on Malpractice Insurance where we are represented by four practicing physicians. They are meeting every other week throughout the summer, and the subcommittees — Health Facilities, Medical, Legal, Consumer, etc. — are meeting weekly. The mul-

tiples facets of the problem are being reviewed and discussed. By mid September we hope to know more about our own past experience in Rhode Island, so as to be able to chart a course for the future. This is the reason for our recent questionnaire mailing requesting your experience with professional liability in the past few years. It seems inconceivable that these data are not easily available, but we are in the process of digging for it.

And just as it is the busiest summer I can ever remember, it is leading into a busier fall and winter as we hopefully prepare a remedial legislative package for consideration by the General Assembly. The Medical Society Malpractice Commission will be meeting when there are substantive proposals available for them to discuss. And then a statewide information campaign will be launched by **YOU — THROUGH YOUR PATIENTS!** — to emphasize that "The Patient Pays," that this is not the problem of the medical profession — but it is a health care cost which can and must be restrained and, hopefully, reduced.

But, full page information — imparting advertisements cost money — and that is why the House of Delegates resolved to assess each member \$50.00, so please do your part. It has been particularly heartening to receive contributions from non dues-paying members. It gives all of us the impetus needed to carry on in this time-consuming effort.

So, do your part — and start now!!

SEND IN YOUR CONTRIBUTION!

GIVE US THE INFORMATION!

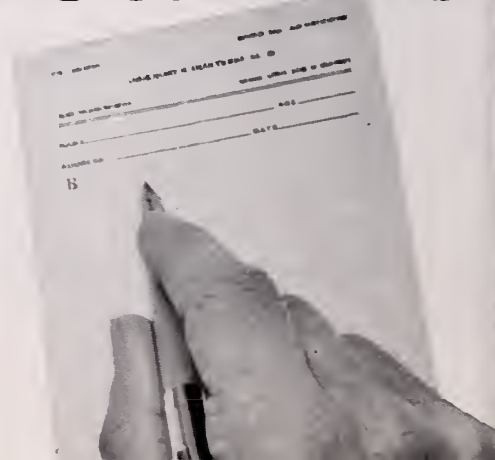
TALK TO YOUR PATIENTS!

THE PATIENT PAYS!!!





Bioequivalence



The weight of scientific opinion:

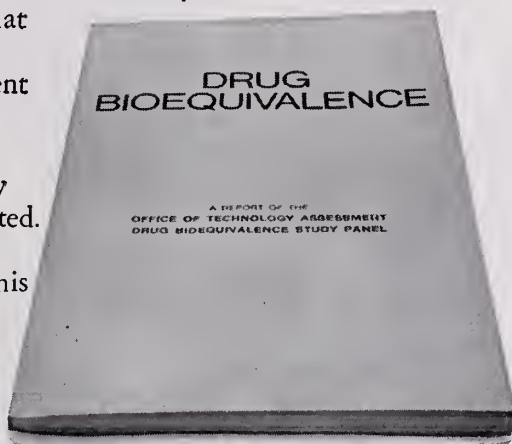
If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that drug's safety and effectiveness solely because the chemical content is the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has commented on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalence in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented inequivalences constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Protecting the integrity of your prescription



where does Mrs. Pickney go now?

She's progressing very well. Doesn't need extensive hospital care any longer. And yet she's still not ready to take care of herself at home.

Now, you and your patient have an alternative. Another level in progressive patient care. Skilled Nursing Facilities. Because care in selected SNFs is now covered under all Blue Cross and Blue Shield subscriber contracts for anyone under age 65.

By using an SNF participating in the Blue Cross and Blue Shield program, your patient can receive needed care in a facility meeting or exceeding Federal Medicare requirements. Care for your patient is directed by you through a qualified registered nurse. All medically necessary therapy and medication as well as your visits are covered, as they would be for

hospital services as outlined in the patient's subscriber contract.

For you, this new benefit means the same claims filing procedures and forms now being used with assistance as close as your phone just by calling your professional relations representative.

For your patients, it means health care coverage in a facility designed for their particular recovery needs.

Skilled Nursing Facility. Another link in progressive patient care benefits from Blue Cross and Blue Shield of Rhode Island. SNFs—they're on Mrs. Pickney's way home.



**Blue Cross
Blue Shield**
of Rhode Island

For a complete list of participating SNFs or additional information, write or call Blue Shield Professional Relations.

Physicians Seeking Opportunities In Rhode Island

Kowit Kouwabunpat, M.D.
621 Memorial Drive
Apartment 605
Chattanooga, TE
General Surgeon
* * *

F. Schwarz, M.D.
1192 Temple Drive
Yardley, PA 19067
Ophthalmologist
* * *

R. I. Faragalla, M.D.
6517 Landover Road No. 101
Cheverly, MD 20785
Urologist
* * *

M. H. Kulkarni, M.D.
254-20 74th Avenue
Glen Oaks, NY 11004
Anesthesiologist
* * *

Peter Burkart, M.D.
5714A Brown Avenue
Fort Knox, KY 40121
Internal Medicine & Hematology
* * *

Purshottam B. Bhangdia, M.D.
9111 Church Avenue Apt. 3N
Brooklyn, NY 11236
Anesthesiologist
* * *

Rafiq Patel, M.D.
300 28th Street, S.E.
Charleston, WV 25304
General Surgery
* * *

John Christodoulides, M.D.
365 Englewood Avenue
Buffalo, NY 14223
Urologic Surgery
* * *

Perran Iyigun, M.D.
205 3rd Avenue Apt. 11-B
New York, NY
Pediatrics
* * *

Robert J. Breiman, M.D.
7801 N.E. Fourth Court
Miami, FL 33138
General Practitioner
* * *

Daniel C. Budd, M.D.
789 Kimberly Court
Gaithersburg, MD 20760
General Surgeon
* * *

Yong Ming Lee, M.D.
5452 Old Glenwood Park Avenue
Erie, PA 16509
General Surgery or Colon &
Rectal Surgery
* * *

Agu Suvari, M.D.
Qtrs. F-26
Naval Hospital
Philadelphia, PA 19145
Internal Medicine & Oncology
* * *

David Wong, M.D.
291 Dalton Drive
Snyder, NY 14226
Urology
* * *

Sabina Ali Khan, M.D.
5 East 98th Street, Room 1018
New York, NY 10029
Anaesthesiologist
* * *

Charles J. Zwerling, M.D.
218 Chandler Road
Goldsboro, NC 27530
General Surgery
* * *

Michael R. Sandberg, M.D.
505 N. Armistead Street
Alexandria, VA 22313
Internal Medicine
* * *

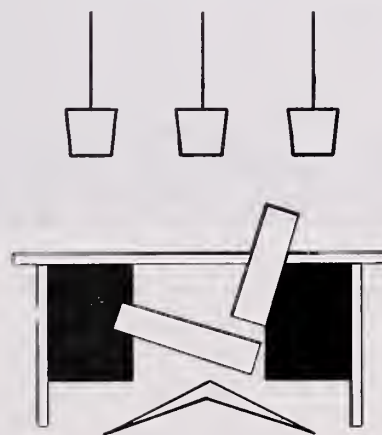
Cheo-Ming Jean, M.D.
1420 Arch Street, Apt. C-208
Norristown, PA 19401
General Practitioner

(Continued on page 316)

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) GAspee 1-5228

Hopkins

Profile "20"

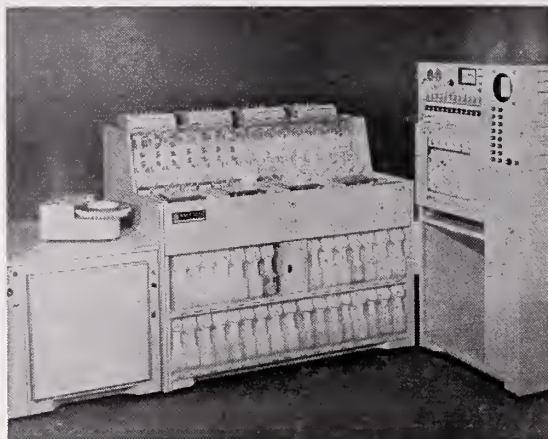
Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES

\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph.. D

DONALD MATTERA
B.S. M.T. (ASCP)

ATTENTION:

Doctors and Nurses

Here's a way to preserve any picture, diploma, certificate, etc. forever. Just by calling or writing to:

LAMINATING UNLIMITED

1492 Park Avenue

Cranston, R. I. 02920

(401) 943-1884

HEALTH HAVENS

A SKILLED NURSING HOME
MEDICARE PARTICIPATING



Registered Professional Nurses On All Shifts
Dietician Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited

MAL- PRACTICE QUESTIONS ???

**Depend on
Starkweather & Shepley
for the answers
and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.

ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

155 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900





R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.

**TASCA
ABC
PLAN**



Pretend it's 1961. Would you invest in Chateau Latour?



Did you see the article about the man who bought the fancy French wine 10 or 12 years ago at \$1.50 a bottle, and now it's worth so much he can't drink it?

Well, it's true.

If you had the specialized knowledge and insight it takes to invest in wines, you could have made a killing between 1961 and 1974. But, most likely, you didn't. Because common sense told you not to try unless you knew what you were doing.

The same principle applies equally well to other kinds of investments. There are no substitutes for the knowledge and insight that come from thorough research and years of professional experience.

If this principle is true for professional money managers in general, it's especially true for Industrial National's Trust Department. We've got the people, the philosophy and the organization needed to make your money grow.

In fact, we'll gladly match the growth record of the investments we manage against anybody else's.

To find out more, give us a call. Ask for Mr. Evans at 278-6607. He'll show you how easy it is to make the necessary arrangements. And you'll probably find that the service costs much less than you think.

Trust & Investment Division,
Industrial National Bank, 100
Westminster Street, Providence,
Rhode Island 02903

IN BANK
Industrial National Bank

Something extra in Investment Management.

BROWN UNIVERSITY HEALTH SERVICES

Student Health Physician — September opening, full time at Brown University. Share general medical care of students and emergency care of faculty and employees.

Prerequisites: Board certification or eligibility—preferable in gynecology, family medicine, internal medicine, or adolescence medicine. Experience in a college or University student health service preferred.

Competitive salary and good benefits.

Reply with curriculum vitae to:

Roswell D. Johnson, M.D., Director
Brown University Health Services
P.O. Box 1928
Providence, R.I. 02912

An Equal Opportunity and Affirmative Action Employer

Now Available

ALL THE SERVICES PHYSICIANS NEED TO CARE FOR PATIENTS AT HOME

Nursing, Physical Therapy, Respiratory Therapy, Occupational Therapy, Speech Therapy, Social Service, Nutritional Counseling, Laboratory Services, EKG, EEG, X-Ray, Medical-Surgical Supplies and Equipment, Medications, Meals-on-Wheels, Homemaker-Home Health Aide, and Transportation.

WILLIAM C. HARVEY

Director

RUSSELL P. HAGER, M.D., Ph.D.

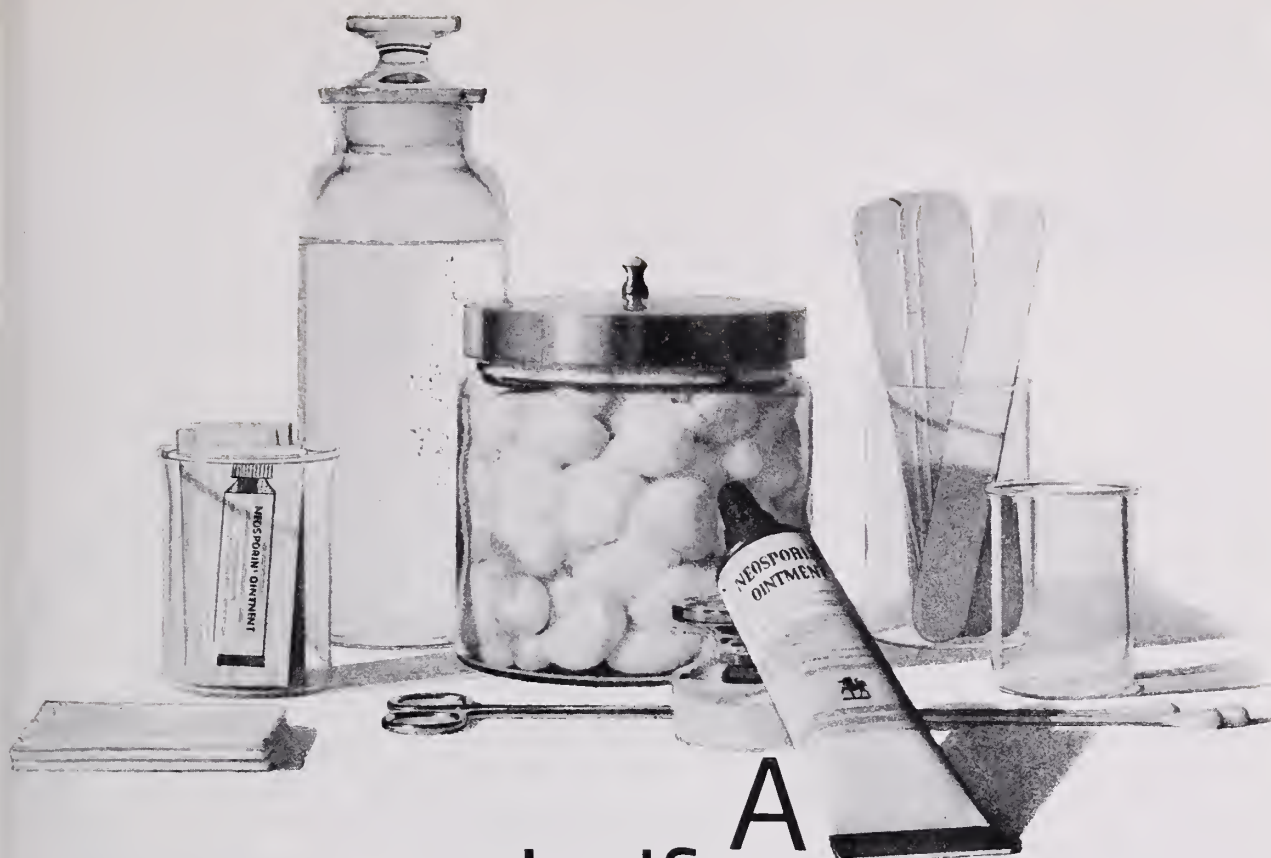
Medical Director

CALL 521-2633



157A WATERMAN STREET

PROVIDENCE, RHODE ISLAND 02906



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started.

In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare.

Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced.

Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment (polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where

absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

*

WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium fre-

quently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy

patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630

Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance.
Hydrochlorothiazide to help keep
blood pressure down and triamterene
to help keep potassium levels up.

We have a specialty too. Office interiors.



ROITMAN & SON, INC.

Fine Furniture and Accessories

161 South Main Street.
Providence, Rhode Island 02903
Telephone (401) 861-6010

Open Monday and Thursday evenings until 9.
Convenient terms • Free parking
Delivery arranged beyond local area.

We plan and furnish professional offices of any size, from the carpet up. Our professional interior designers work with you or with your architect. Our people are not only highly talented, they are experienced. Furnishing your office can be one thing you don't have to worry about. Just call us. 861-6010.



Coventry Needs Good Doctors

and

TRAFFORD, INC.

has a professional building for them

YOU CAN — Lease with an option to buy
— Lease office space
— Purchase property outright

This property was an old six room colonial home that was overhauled and is now in perfect condition.

This property is suitable for two consultation rooms with a waiting room and receptionist room as well as record storage area.

FOR FURTHER DETAILS CONTACT MR. JOHN T. TRAFFORD, G.R.I. AT 821-0180.

TRAFFORD, INC.
REALTORS — INSURANCE AGENCY
884-TIOGUE AVENUE
COVENTRY, R.I. 02816

P.S. — We have financing available

NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY

215 Waterman Avenue

East Providence, Rhode Island

Tel. 438-0660

**One contains aspirin.
One doesn't.**



Darvocet-N® 100

100 mg. propoxyphene napsylate
and 650 mg. acetaminophen



**Darvon®
Compound-65**

65 mg. propoxyphene hydrochloride,
227 mg. aspirin, 162 mg. phenacetin,
and 32.4 mg. caffeine



Additional information available to the profession on request.
Eli Lilly and Company, Inc., Indianapolis, Indiana 46206

Lymphomas In Children

Long-Term Remissions Are Common In Both Hodgkins And Non-Hodgkins Lymphoma With Newer Treatment Regimens

By Edwin N. Forman, M.D.

A voluminous literature now exists on the lymphomatous malignant disorders. In this paper, I shall focus on: when to suspect a lymphoma in a child, appropriate diagnostic approaches, the current available therapies, and their chances of success. It is directed to pediatricians and general practitioners, since early diagnosis and their involvement in continuing care critically influence the outcome for children afflicted by these conditions.

DEFINITION

The lymphomas are malignant tumors arising from the lymphoreticular system. As we shall see, they are a group of diseases with probably different causative factors as well as different natural histories. Various classifications have been devised (Table I).

The separation of Hodgkin's Disease (HD), with its characteristic Reed-Sternberg cell, from Non-Hodgkin's Lymphoma (NHL) is based on a clearly different histology, pattern of spread, response to therapy, and ultimate prognosis. Subdivisions on the basis of diffuse versus nodular pattern, degree of cellular differentiation, and histiocytic versus lymphocytic predominance have been exceedingly

EDWIN N. FORMAN, M.D., *Director Pediatric Hematology/Oncology, Associate Professor of Pediatrics, Brown University Program in Medicine*

This is one of a series of papers supported by the Continuing Education Program of The Rhode Island Health Science Education Council.

helpful in predicting response to therapy and prognosis in HD, but to date have been of less value in childhood NHL.

FREQUENCY AND ETIOLOGY

As a group the lymphomas are the third most common malignant disorder in children under the age of 15 with an incidence of 1.3 new cases per 100,000 children per year and exceeded only by the leukemias (4.2) and tumors of the central nervous system (2.6). NHL exceeds HD in this age group, but the incidence of HD rises rapidly in the teens. Males are more frequently involved.

The causes of these tumors are not known, but some highly suggestive possibilities have been uncovered. Most striking is the association between the Epstein-Barr virus (the causative agent of infectious mononucleosis, which is clearly non-malignant) and the African cases of Burkitt's lymphoma. There is an increased incidence of lymphomas in patients with immunologic disorders, both congenital (combined immuno-deficiency, X-linked agammaglobulinemia, Wiskott-Aldrich syndrome, ataxia-telangiectasia, Chediak-Higashi syndrome, IgA deficiency) and acquired (transplant recipients receiving immunosuppressive drugs). Finally, diphenylhydantoin (Dilantin®) administration has, on rare occasion, produced a lymphoma-like condition.

CLINICAL FEATURES

Although initial findings in HD and NHL may be similar, there are usually significant differences.

(Continued on next page)

TABLE 1

Classification of Malignant Lymphomas in Children	
Type	Comments and Old Terminology
Hodgkin's Disease	
Lymphocytic Predominance	Best prognosis Observed in early disease "Hodgkin's Paragranuloma"
Nodular Sclerosis	Second best prognosis Most common form in children Collagen septa divide tissue into nodules containing atypical histiocytes lying in lacunae
Mixed Cellularity	Intermediate in histology and probably evolution between Lymph. Predom. and Lymph. Deplet. "Hodgkin's Granuloma"
Lymphocytic Depletion	Worst prognosis Probably late stage disease Rare in children "Hodgkin's Sarcoma"
Non-Hodgkin's Lymphomas	(All diffuse: nodular forms, such as Giant Follicular Lymphoma, do not occur in children)
Undifferentiated	Includes Burkitt's type Non-Burkitt's has high leukemic potential
Lymphocytic Poorly Differentiated	"Lymphoblastic Lymphosarcoma" Probably stage of acute leukemia
Lymphocytic, Well Differentiated	"Lymphocytic Lymphoma" Not reported in childhood
Histiocytic	"Reticulum Cell Sarcoma"
Mixed, Histiocytic-Lymphocytic	

HD: Presenting symptoms and signs reflect the natural history of lymph nodal involvement followed by *orderly progression* along lymphatic channels and invasion of adjacent structures. Thus, the most common presenting complaint is painless, progressive enlargement of superficial node(s), especially cervical (approximately 75 per cent of the cases). Others include persistent non-productive cough (secondary to mediastinal mass), abdominal pain (with retroperitoneal adenopathy), fever (most common: intermittent elevations to 38.3-39° C (101-102° F); daily remittent "picket-fence" type with sharp afternoon or evening spikes to 40° C (104° F), often with a chill; Pel-Ebstein pattern (rare in children), night sweats, anorexia and weight loss. Less commonly nodal pressure in various areas may cause symptoms of respiratory, circulatory, or neurologic impairment.

NHL: Presentations reflect the pathogenetic features of 1) origination wherever lymphoid tissue is present: within lymph nodes (adenopathy in approximately 50 per cent of cases; cervical most

common: 33 per cent) or outside of nodes (e.g. masses in skin, gastrointestinal tract, kidneys); 2) tendency to multicentric appearance (disease often widespread at diagnosis, including spinal fluid and bone marrow); and 3) rapidity of progression. Weight loss, fatigue, and fever are uncommon as early findings.

It is of particular note that both conditions can, through the development of a mediastinal mass which compresses the superior vena cava and trachea, cause a potentially life-threatening condition (superior vena cava syndrome) consisting of brassy cough, hoarseness, dyspnea, cyanosis, facial plethora and venous engorgement, and edema of head and neck.

DIAGNOSIS

Early diagnosis almost certainly increases curability. A common problem, especially for cervical masses, is to rule out infectious adenitis. This condition is often associated with an upper respiratory infection and tender, warm, and usually bilateral swellings. Lymphomas are firmer, usually unilateral and painless, but can be symmetrical and somewhat tender (from rapid growth and stretching of node capsule). Depending on the history and other findings, if adenitis is suspected, a throat culture tuberculin and mononucleosis tests, a course of antibiotic therapy, and a one to two week observation period are often employed before biopsy.

The aims of the diagnostic work-up are two fold: First: to make a *tissue diagnosis* by incisional or preferably excisional (and *not* needle) biopsy. It is important to choose a site most likely to be informative. A prominent node, increasing in size, is the best choice. Smaller satellite nodes are likely to show reactive hyperplasia rather than tumor. Inguinal and submaxillary nodes are avoided if possible, since changes secondary to recurrent infections may mask a malignant process. Repeat biopsy is indicated if the initial one is inconclusive. Second: to define the *extent of the disease* in order to deliver the most effective therapy.

STAGING

Staging (Table 2) has proved to be of crucial value in HD, but is experimental in NHL. Accuracy is necessary not only to aim for eradication of all disease sites, but to minimize the deleterious effects of extensive radiotherapy and chemotherapy on growing tissues. Clinical staging is further refined with pathologic staging, determined by laparotomy with splenectomy for children over 5 years of age, which includes wedge and needle liver biopsies, bone marrow wedge biopsy from the iliac crest.

and multiple abdominal lymph node biopsies (splenic hilum, celiac axis, para-aortic, common iliac, mesenteric, and others), and in the female patient, fixation and radiopaque clip marking of the ovaries outside the field of possible abdominal radiation.

Studies for diagnosis and staging should thus include, in addition to the history, physical examination and initial biopsy of the tumor, a complete blood count including platelets, bone marrow aspiration (and biopsy in HD), erythrocyte sedimentation rate, urinalysis, blood urea nitrogen, serum creatinine, uric acid and liver chemistries, tuberculin test, selected x-ray studies (chest, intravenous pyelogram, skeletal survey, inferior vena cavagram, lymphangiography in most cases of HD), cerebrospinal fluid examination in NHL, and staging laparotomy in HD. Other studies of interest and sometimes of value include liver scan, immunologic assessment (immunoglobulins, delayed hypersensitivity, T and B cells), whole body gallium scintigrams, serum copper and iron, and Epstein-Barr virus studies.

TREATMENT

Cure of any lymphoma by surgery alone, even if the lymphoma is apparently well-localized, is rare. With the advent of methods for identifying disease sites and advances in radiotherapy and

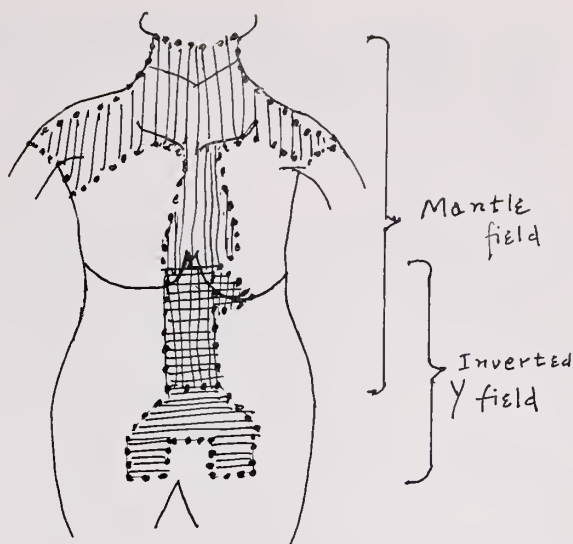


FIGURE 1.

chemotherapy, remarkable progress in disease control has been achieved. Therapeutic approaches are undergoing constant revision; the following discussion is a brief and simplified outline. Permanent eradication of NHL is, unfortunately, still uncommon. With HD, however, the possibility of cure is no longer questioned. Rather, the problems which treatment schedules are likely to produce the highest cure rate for different disease stages. The potential long-term risks of extended field or total nodal radiotherapy in a growing child and the remarkable success of drug combinations have led to increasing use of radiation limited to involved fields and raised the question of when *not* to use adjuvant chemotherapy. At present the treatment of choice at most centers for Stages I and II is radiotherapy alone, directed either to the involved field only or to include the contiguous lymph node bearing areas (extended field approach): The "mantle" in the upper portion of the diaphragm or the "inverted Y" below (Figure 1), as dictated by the localization and extent of the disease. Stage III is generally treated with total nodal irradiation (mantle *and* inverted Y). However, many centers are using supplemental chemotherapy for III and IIB, and this may well prove to be the most successful approach. For Stage IV, chemotherapy with or without radiation is preferred. The use of multiple drugs is clearly superior to single agents. Many highly effective regimens have been developed, such as MOPP and COPP (repeated courses of nitrogen Mustard or Cytosan,[®] Oncovin,[®] Prednisone and Procarbazine).

(Continued on page 318)

TABLE 2
Staging Classification

Stage I	Involvement of a single lymph node region (I) or of a single extralymphatic organ or site (usually by direct extension from a nodal area (IE))
Stage II	Involvement of two or more lymphoid regions on the same side of the diaphragm (II) or localized involvement of extralymphatic organ or site and of one or more lymph node regions on the same side of the diaphragm (IIE)
Stage III	Involvement of lymph node regions on both sides of the diaphragm (III), which may also be accompanied by localized involvement of extralymphatic organ site (IIIE) or by involvement of spleen (IIIS) or both (IIISE)
Stage IV	Diffuse or disseminated involvement of one or more extralymphatic organs or tissues with or without associated lymph node enlargement.

Each stage is further divided into A: no systemic symptoms; and B: constitutional symptoms of night sweats, unexplained fever with temperatures above 38°C (100.5°F), or weight loss of more than 10 per cent of body weight in the prior 6 months.

The Mutual Obligations Of The Medical Profession And The Press

Bear In Mind That The Press Can Be An Ally

By Lawrence K. Altman, M.D.

We are here this afternoon for one of the rare discussions concerning the mutual responsibilities of physicians and scientists and the press in reporting the news of medicine. The topic is vital both to the progress of medicine and to the public's welfare. Medicine is in the news virtually every day. It may surprise some of you to learn that that situation is not new. Medical advances traditionally have made news in this country, particularly those that have affected public health.

BENJAMIN WATERHOUSE AND THE PRESS

In 1799, for example, when Doctor Benjamin Waterhouse learned about Doctor William Jenner's smallpox vaccination technique, Waterhouse said he "was struck with the unspeakable advantages" — that is the outstanding protection that smallpox vaccination could offer.¹ Waterhouse then proposed its routine use for his fellow Americans through the usual channel of communication — a newspaper article. He said: "As the ordinary mode of communicating even medical discoveries in this country is by newspapers, I drew up the following account of the Cow Pox, which was printed in the *Columbian Centinel* (a semi-weekly newspaper published in Boston) March 12, 1799."

Now, 176 years later, newspapers are still reporting news about smallpox: its impending eradi-

LAWRENCE K. ALTMAN, M.D., *Medical Writer*, *The New York Times*.

Read at the 164th Annual Scientific Assembly of the Rhode Island Medical Society, April 16, 1975. Adapted from a paper which appeared in somewhat different form in *Clinical Research* 22:226, Oct 1974

cation, and with it the controversies about the need to continue regular vaccination schedules.

Although the media thrive on controversy, other functions are served as well. With regard to science, the media transfer knowledge and promote understanding. The quality of the reporting varies with the individual and the publication. Whatever, the ultimate aim is to help promote the practice of the best brand of preventive and curative medicine. The audience is not just the public but also the medical profession. In effect, the media serve as a form of primary and continuing medical education.

Nevertheless, for reasons that are not clear, in recent years many doctors have tended to overlook the importance of this relationship.

We cannot discuss how well the press and medicine are fulfilling their obligations or how doctors can improve their image without stopping to take an overview of the relationship between medicine and journalism.

ROLE OF THE PRESS

Human interest and welfare are probably the basic reasons for journalism's interest in medicine. But as third party payments particularly those from the taxpayer, have become the way of life in medicine, funding has been the impetus for much recent interest.

Taxpayers not only foot the bill for many of the costs involved in every day medical practice in American hospitals, they also are the prime support for medical research.

Medical research and medical practice once were conducted almost exclusively on a private basis.

That is no longer the case. Now the American taxpayer funds a large share of medical practice and medical research, not just at NIH but in private institutions throughout the country.

INCREASING PUBLIC SCRUTINY

Much of your income comes from tax monies, and even more comes from third party contracts. Like it or not, this means that the direction of scientific research and physician payments have come under increasing public scrutiny. This scrutiny covers the scope of the research, and the ethics of clinical investigation, which often involves more than just the patient and his doctor. It also covers the ethics of medical practice.

Politicians debate the total expenditures allocated to research *vis a vis* medical care *vis a vis* defense budgets. Points that once were discussed mainly on rounds and in hospital corridors have now become public issues. The reason is simple: the taxpayer foots a large share of the bill. Accordingly, the medical community now is subject to the same scrutiny that the press applies to Congress, the Defense Department or the State Department, for examples.

Let's pause to reflect a moment.

Once upon a time, the physician was an individual entrepreneur in the strict sense. The patient-doctor relationship was rigidly confidential. The patient paid his fee directly to the doctor. Public health practices were rudimentary. Research as we know it was more a dream than a reality. What little research was done, generally was done by the physician in his spare time or when a freak opportunity presented itself. Those who chose to take advantage of the situation to satisfy their curiosity or to improve man's lot did so at their own personal expense.

WILLIAM BEAUMONT

In 1825, for example, William Beaumont saw the research potential in the hole that a bullet had created in Alexis St. Martin's stomach.²

To refresh your memory, Beaumont, then an Army surgeon, had treated St. Martin minutes after the French-Canadian's chest and abdomen had been ripped open by an accidental shotgun blast. Beaumont did not expect his patient to live when Beaumont first came to St. Martin's aid. But St. Martin recovered, thanks to nature's healing powers and Beaumont's constant attention. Beaumont nursed, clothed, lodged, and supported St. Martin at much personal inconvenience and expense for nearly two years.

St. Martin regained his strength and resumed

normal physical activities. But the gunshot wound had left a fistula and St. Martin became known as the man with a lid on his stomach. That situation made Beaumont think: "I had opportunities for the examination of the interior of the stomach, and its secretions, which has never before been so fully offered to anyone."

Beaumont had those rare qualities that makes a person both a doctor and a researcher. But unlike those of today's era, Beaumont financed his own research, even while a federal employee as an Army surgeon. For almost a decade, from 1825 to 1833, Beaumont, whose salary was meager, paid out of his own pocket to support St. Martin as Beaumont's clinical research patient. St. Martin, in turn, entered into Beaumont's service.

Beaumont wrote "during this time, in the intervals of experimenting, he performed all the duties of a common servant, chopping wood, carrying burthens, etc., with little or no suffering or inconvenience from his wound."

Meanwhile Beaumont recorded a total of 238 observations on fundamental aspects of human gastric physiology. Periodically, Beaumont reported these findings in medical journals and eventually in a book. Meanwhile, St. Martin apparently was a popular figure in the press.

Let us not forget that financing one's own research extends well into the twentieth century.

BANTING AND BEST

In the 1920s Banting and Best funded themselves when they sought to discover insulin.³ Banting sold his Ford and Best depended on what he had saved from his World War I military pay as they lived in the laboratory with their dogs. However, times had changed. Banting and Best worked as a team with others in an institution — the University of Toronto — that was publicly financed. In other words, Canadian taxpayers paid for the roof over their heads. But the researchers paid their own way for the privilege of discovering insulin! And the researchers did not patent their discovery.

World War II brought great changes on medicine. The pressing needs of a group of countries, unprepared for war and fighting against a threatened way of life, accelerated applied research. Responding to needs, researchers came up with penicillin. They did not discover it then; they went back to a breakthrough others had made years before. Still other scientists produced antimalarial drugs. And surgeons learned the lifesaving benefits of blood banking — all from research funded by government in a period of ultimate stress: war.

(Continued on next page)

RESEARCH AND PUBLIC FUNDS

When the war ended, alert public officials realized the potential of medical research for everyday clinical medicine. Congress poured money into research, chiefly to investigators in the medical schools throughout the country. These were the funds that helped establish medical schools in areas when none had previously existed. A few deans saw potential dangers for the day when the faucet was turned off. But most researchers seemed awed by the sudden affluence. Then the competition began to build bigger and better research units. The net effect was an investment that paid huge dividends to society.

But where were your annual reports to the stockholders — the American taxpayer?

The press covered some aspects. The gee-whiz nature of the science and medicine involved drew much of the press' attention. Medical leaders did not offer guidance. The press did not probe as deeply as it might have into the impact that federal funding would have on medical education, the distribution of younger physicians, the cost of medicine, and other socioeconomic factors.

In short, the stories tended to be more concerned with the science of the research than with what the research would mean to patients. Perhaps not until the last five years when Americans realized they must set priorities did these become issues for medical research.

Many among the modern generation of scientists lost sight of what Waterhouse knew was so important: responsibly reporting advances in newspapers. How many scientists tried to communicate directly with the public? Instead of supporting such efforts, many scientists looked down on their colleagues as publicity seekers. In my medical school days, the general attitude among doctors toward the lay press was fear and disdain.

Physician-scientists said they considered it more important to communicate with their peers in technical jargon than to the public in simpler terms. What happened? The public perceived the doctor as arrogant.

The situation was not confined to the United States.

Doctor Harry Nelson, the Medical Officer of Pretoria, South Africa, reflected on "the press and us" in response to an article that stated: "The press is capable of doing more damage to more people in a very short time than almost any other known organization."⁴

But Doctor Nelson rebutted: "This statement

about the press which is an oft-repeated accusation by many of our colleagues, is exaggerated and out of proportion to the good publicity which we do get and can still get from the press. Indeed, so much more could be done through the willing cooperation of the press to give the public intelligent, useful, and health-promoting information, if only we would make better and correct use of it."

He went on to offer testimony to the rare instance in which he was misquoted: "Pressmen are just as acutely conscious and conscientious about giving correct information as you or I. They also have to safeguard their own reputations and the security of their jobs. A newspaperman's success depends on his reputation for accuracy... It is perhaps true that we may be misquoted, but this is often our own fault, because we have not been careful enough about the way in which we give information."

Most people are fascinated by medicine because it concerns their bodies and those of their families and friends. Most people want to satisfy their curiosity and learn more about biology, science, and medicine. Just look at a television schedule or the newsstands.

PUBLICITY AND EDUCATIONAL TOOL

But doctors have been slow to perceive this phenomenon and to educate lay colleagues about how advances are made, why they are so costly, and how they might influence their own and their families' lives. However, some who have seen this clearly have used it to their advantage. For the most part they did credit to research and to medicine. Yet, a few got caught in the trap of the limelight, rather than viewing the publicity as an educational tool to a broader goal, these few seemed to have regarded it as an end in itself for themselves.

How has the impact of federal funding changed the relationship between clinical investigators and the press? What are our mutual obligations?

Obviously, relatively little can be done today without special medical tools and instruments. Technology is an integral part of research; we cannot expect many more Beaumonts to appear on the horizon.

PHYSICIAN ATTITUDES AND THE PRESS

From the perspective of a medically trained journalist writing for the lay audience, I would say:

First, doctors must learn to communicate in a way their friends can understand. Don't talk down to them. They have the capacity to understand a

(Continued on page 319)

Blue Shield--Fifteen Years

Many New And Challenging Decisions Will Continue To Appear On The Horizon

By Arnold Porter, M.D.

My address to this Corporation this afternoon will be my tenth as President or Chairman of the Board of Blue Shield of Rhode Island, and, as you know, my last.

First, I would again like to thank the House of Delegates of the Rhode Island Medical Society for having renominated me and the Corporation for having re-elected me to five consecutive terms to the Board of Directors of Physicians Service — now Blue Shield of Rhode Island. It has been a truly great experience, and I have really enjoyed the challenges and have received great personal satisfaction from having participated in the many decisions that have been made over the past fifteen years. Also, as one of your representatives on the Board of Directors of Blue Cross for fourteen years, this experience has been doubly satisfying.

I can tell you truthfully that I am going to miss being a part of these two great non-profit corporations in the years ahead because by now both of them, without my being sentimental, have become a part of my life. However, I do wish to state emphatically that I believe the House of Delegates acted wisely in January when they

ARNOLD PORTER, M.D., *Past Chairman of the Board of Directors of Blue Shield of Rhode Island; Director of Emergency Room Services, Rhode Island Hospital.*

Address delivered at the Annual Meeting of the Corporation of Blue Shield of Rhode Island on March 19, 1975.

nominated new candidates for board membership. Perhaps terms on the board should be limited to a total of four terms or twelve years in order to broaden physician participation in this public oriented organization. I believe also a minimum of at least two terms or six years is essential to learn one's way around in this multicomplex and multifaceted business.

It was in April, 1960 that I was elected to the Blue Shield board; and after serving as secretary in 1961 and 1962, vice president in 1963 and 1964, I was elected president in 1965 succeeding Doctors Joseph O'Connell and Charles Ashworth, both of whom gave so much of their time and self to further the cause of Physicians Service.

In order to put 1960 in a time reference, Dwight D. Eisenhower was President of the United States, Christopher Del Sesto was Governor of Rhode Island, Kenneth D. MacColl was president of Blue Cross, and Stanley Saunders was the executive director of both Plans.

Over the past fifteen years I have collected two files of written material relating to Blue Shield, Blue Cross, and related health care matters. In order to review a small part of the past fifteen years with you this afternoon I have selected at random some of the relevant material which, in addition to its historical interest, will demonstrate some of the trends and external environmental forces which have shaped and guided many of the policies of both Blue Shield and Blue

(Continued on next page)

Cross during my tenure on both boards of directors.

The different subjects about which I have chosen to say a few words have been given no order of priority as to relative importance or interest, but were merely culled from my files on their way to storage in a large box labeled simply "Blue Shield and Blue Cross."

ENABLING ACT

Physicians Service was incorporated in 1949 under the 1945 enabling act providing for incorporation of non-profit medical service corporations also defining their powers. It is most interesting, and I am sure not known by all here, that this act had been amended in 1960, 1961, and 1964.

In 1960 an amendment of little importance required the corporation to pay 135 per cent of the total salaries paid to state personnel who regularly examine the books of both corporations less any salary reimbursement. In 1961, however, and of more importance, the definition of medical services was changed to include the practice of chiropody or podiatry; and a second amendment required the contract of Physicians Service to provide for payment of services rendered by a chiropodist and podiatrist.

In 1964 there were two further amendments to the statute which reflected the new voice of the consumer. The first change required that directors of any non-profit medical service corporation formed after January 1, 1964 shall consist of equal numbers of representatives of the public, doctors of medicine, and subscribers. The original act stated that the majority must be doctors. The second change deleted the provision that the approval of the Rhode Island Medical Society was necessary for the formation of such a medical service corporation, which was part of the original act.

There have been no new amendments since 1964. What future amendments may be legislated one can only surmise, but one can be certain there will be some and that they will be in the interest of the public as determined by the public and the lawmakers.

BY-LAW REVISIONS

As in all organizations, by-laws are drawn up, approved, and then adopted only to be amended at a later date in order to keep abreast of the requirements of an ever changing society.

In my fifteen years on the Blue Shield board there have been revisions of the original Blue

Shield by-laws on six different occasions. The nature of these revisions reflects some of the concerns and pressures we have faced during this interval. The initial by-law changes that were made over these years, which reflected some anxiety on the part of the corporation, transferred approval on matters relating to indemnity fee schedules as well as approval of future by-law amendments to the corporation. This authority up until then had been invested in the board of directors.

The process of nominating non-physician members to the board was altered by the establishment of the nominating committee consisting of five members of the corporation. Previously they had been appointed by the board. Later, the expansion of public representation on the board, long overdue, was accomplished by a by-law change which also increased the total number of board directors to the present 21. This change was soon followed by the addition of physician members to the professional advisory committee, which committee itself was altered to include physician members other than those who were on the board of directors. The inclusion of non-physician members added credibility and stature to this important decision-making committee on professional matters.

The claims committee to which the late Doctor Earl Mara made so many contributions was altered in its membership to meet the ever increasing workload, and it was also made for the first time a standing committee of the board.

In the last revision, in 1974, the official name of the corporation was changed from Physicians Service to Blue Shield of Rhode Island, and corporate titles were adopted. Our Plan was one of the last in the country to make these changes. The Plan had long since provided payment for services other than those of physicians, and the new name more aptly publicized our membership in the National Association of Blue Shield Plans.

All of these amendments reflect reaction to change which I interpret to be progress. It is valuable to refresh our memories from time to time on what our by-laws actually say and what they actually mean — something probably many of you have not thought about for several years. At present, I can readily see the need for future revisions. These changes will be your responsibility and need no comments by me today.

COMMITTEES

There are many committees of the Blue Shield

and Blue Cross boards. As an appointee or ex-officio member of three Blue Cross and seven Blue Shield committees, I again call to your attention the tremendous amount of physician input, time, and energy expended in behalf of the affairs of these corporations without financial compensation. I include in this statement the non-physician directors, who also are very much involved in committee work. I believe this is one of Blue Shield's tremendous assets that never appears on a balance sheet. It is this voluntary, dedicated, professional, and community involvement that sets these plans apart from the commercial insurance companies.

I am not going to say anything about the professional advisory and claims committees as you are all familiar with their activities. I do wish to call to your attention a new and most important, and at present very active, committee. This is the joint benefits review committee of Blue Cross and Blue Shield, established in 1973, which reports to both boards of directors and is charged, as the name implies, with reviewing new benefits.

Now under consideration or recently considered by this committee, which has six members, three from each board, are such subjects as: the joint operations agreement negotiated this year between Blue Cross and the Rhode Island Dental Service Corporation which resulted in the establishment of a new third corporation known as Delta Dental of Rhode Island; continual review and re-definition of medical emergency coverage; experimental programs of day/night care for psychiatric patients to offer viable alternatives to typically long in-hospital stays; establishment of special research and development funds to promote further experimentation in the area of HMOs; skilled nursing facility benefits to be implemented shortly to offer an alternative place of care to physicians; possible programs for expansion of drug coverage; emergency center coverage in appropriate facilities other than hospitals; vision care programs; surgi-centers, both hospital based and freestanding, which again is intended to offer an alternate place of service other than the expensive hospital setting; preventive care riders for pediatric services to make the scope of benefits offered by traditional Blue Cross and Blue Shield plans more competitive with HMO programs; statewide home care programs; and expanded coverage in physical therapy, speech therapy, and occupational therapy.

A host of other ambulatory services will come under the jurisdiction of this committee in the

next few years and will need the combined support of all of you to succeed in meeting increasing consumer demands. This committee is really the long-range planning committee of both boards for subscriber benefits, and subscriber benefits is what Blue Cross and Blue Shield is all about.

GOVERNMENT PROGRAMS

In September 1960, shortly after I was elected to the Blue Shield board (then Physicians Service), the Social Security amendments of 1960 became Public Law 86-778, which law, in addition to broadening coverage, liberalizing eligibility, and increasing certain benefits under the Social Security program, established a new federal-state grant-in-aid program to assist in the payments of personal health services to those needy and near needy over 65 who were unable to finance these services out of their own resources. This program, financed through general revenues, was titled Medical Assistance for the Aged and was known as the Kerr-Mills law. Rhode Island did not implement this program until 1965. The variety and extent of services as well as the federal matching funds were different in each of the states.

Blue Shield's involvement in this program was minimal. It was heavily backed by the AMA in preference to other legislative plans under consideration by Congress at that time which embraced compulsory medical care for the aged with both medical and hospital benefits financed by higher Social Security taxes. The most popular of these proposals was the administration's (President John F. Kennedy) known as the King-Anderson bill. This bill divided the nation and the Congress into two bitterly opposing camps, one side believing it to be the salvation, the other the end of health care in the United States. Blue Shield's official position was on the side of the medical profession in favor of voluntary insurance for those who could afford it, and with government help in one way or another for those who could not.

After eighteen months of political struggle, the 87th Congress in the summer of 1962 killed the bill; but in 1963 a refined King-Anderson bill was reintroduced and the battle was on again. Organized medicine brought out its big guns claiming the issue was not a medical one, but an issue affecting the economic and political freedom of the country. President Lyndon B. Johnson's landslide victory over Senator Barry Goldwater, however, squelched the conservative opposition, and

(Continued on next page)

Medicare, as the King-Anderson bill had become known, was included in the Social Security amendments of 1965; and on July 30, 1965 became Public Law 89-97.

Blue Cross and Blue Shield became inexorably involved, and almost all Blue Cross plans and 37 Blue Shield plans throughout the country were chosen as carriers or intermediaries for the Medicare program, Blue Cross and Blue Shield of Rhode Island were among them. The impact of assuming the carrier role for Medicare in Rhode Island resulted in the development of Plan 65 which fills the deductible and co-insurance gaps in the federal program.

The impact of this program on Blue Shield as an organization was probably more dramatic than any change that has occurred in its history. All areas of the operation were affected by this new obligation. We have seen the organization grow from 172 employees prior to Medicare to the present employment level of over 500 people.

The functions and responsibilities of public relations, subscriber relations, professional relations, claims administration, and even the board of directors were radically changed within a few short months. Very few plans in the country including those in Rhode Island were totally prepared for the impact which this federal program would create. Out of that rather chaotic situation, however, Blue Shield in Rhode Island was able to adjust; and from all indications of performance published by the Social Security Administration, Blue Shield of Rhode Island now has a Medicare operation that is second to none in the entire nation. Both the physician community and the over 65 population of our state have gained advantages from the efficient administration of the Medicare program.

After Medicare the next significant piece of federal health legislation was the PSRO provision included in the Social Security Amendments of 1972 (Public Law 92-603). Now just getting under way, the law may have far more influence on the medical profession than did Medicare. At this moment the role and relationship of Blue Shield to PSRO is not completely defined, but its involvement is certain.

After PSRO came the HMO Assistance Act of December, 1973 encouraging and providing methods for financing alternative forms of health delivery other than the traditional fee for service. As I devoted my annual address to this subject last year, I will say only that although this HMO

concept is not at this time any panacea, provisions are made for HMOs in every one of the national health insurance proposals now before Congress. To remain a viable organization, Blue Cross and Blue Shield of Rhode Island must maintain involvement, at least experimentally, with this concept. Ignoring HMOs altogether would be utter folly as I stated a year ago.

The last and again a very significant piece of government legislation signed into law January, 1975 by President Gerald Ford was the National Health Planning and Resources Development Act of 1974 (Public Law 92-641). This act provides for a national health planning process with teeth. It clearly states that the federal government is intruding into and will control medical services. It replaces the Hill-Burton Hospital Construction Act, Comprehensive Health Planning, and the Regional Medical Programs. It intends to create *and fund* a national network of regional planning agencies. Funds will be made available to regulate rates for health services in six states, and this number is certain to increase. Dropped from this bill were provisions which would have established public utility-type regulations on physicians' services as well as those of hospitals. Hospital privilege arrangements, however, for many physicians will be different in the future with more standardization and amalgamation of facilities. The regulations and guidelines to carry out the program have not been written, and the eventual long-term effects this bill will have on health care systems and health care itself remains to be seen. It is certain the federal government is fed up with pumping billions of dollars into health services which have increased in the past ten years from \$3 to \$30 billion, and is now planning to do something about it.

Many national health insurance proposals, all of which incorporate HMO and PSRO provisions, are now again before Congress. It cannot be determined at the present time which, if any, of these proposals will receive approval; but one can predict that probably a middle-of-the-road approach bill will emerge incorporating hopefully the better provisions of all of them. Because of the energy crisis and the combination of recession and inflation, passage of a national health insurance bill has been delayed and may not receive serious consideration for another year. Because of public dissatisfaction with unavailability, inaccessibility, high cost, and two standards of medicine, one for the rich and one for the poor.

(Continued on page 320)

The Ambulatory Surgical Facility

Concept Is Consistent With Containment Of Costs And Quality Of Care

By Charles L. Hill, M.D.

The philosophy of medical care generally is changing. To evaluate suggested new methods of delivery using existing criteria perpetuates reactionary provincialism which, in part, created the demand for change. Who can impartially evaluate the present and determine what advantages may be gained by such efforts as ambulatory surgical facilities — The patient with all the fears inherent in variability of ill health? The insuring agency with the greatest motivation being the least expenditure of dollars? The hospital administrator and trustees who are threatened by the erosion of their micro-cosmic empires? The physicians with the possibility of enrichment with excessive surgery or anesthesia? Politicians who owe their positions to politically attractive but not always practical promises? The bureaucrats whose jobs depend on increasing governmental control? Obviously, on such

CHARLES L. HILL, M.D., *Surgeon, Department of Otorhinolaryngology, Rhode Island Hospital; Clinical Instructor, Brown University Program in Medicine.*

Presented at the Research Conference on Ambulatory Surgery sponsored by the Dept. HEW at Washington, D.C., May 13-15, 1975.

an emotional subject complete impartiality is a naive hope, but honest thinkers can recognize their bias and work together to achieve a reasonable thesis for this time in history.

The elements we all agree upon are the total costs to the community, maintaining the highest standard of care, and the availability of care. As distasteful as it is to my Yankee background, I feel any change in the existing system without a careful coordinating agency would be of little value. Only with such a planning agency would the total community costs be balanced against the total community needs. This strikes at the fundamental concept of university centers and general hospitals, but the days of independent Topsy-like growth of health facilities and services must end. Basic to a determination of need for ambulatory facilities is an agreement on the method of payment for health care. Should each independent institution be responsible through charges, grants and endowments for all its costs? I believe there are certain benefits derived from the presence of a health facility, from education of health personnel, from research for which the community as a whole should be

(Continued on next page)

financially responsible through general taxation. Day-to-day costs of providing services to the ill may then be more accurately and equitably assessed to them. The different categories of illnesses could then be assigned appropriate cost allowing us now to discuss the advantages of ambulatory surgery without the obvious concerns of "taking the cream" from hospital income. Since this is not a very popular thought, the only other way to reduce community costs would be to close superfluous beds as the patient load shifted. Care must be taken in properly assessing the value of these beds to the community. The services of the institution, the educational facilities available, and the intangible resources are factors to keep in mind rather than the overall geographic location of alleged excessive beds.

The definition of such a facility should not be so restrictive as to be unable to provide for changing concepts in surgical practice. An ambulatory operating facility should be a physical plant to provide the sophisticated equipment and personnel to do such procedures which, when finished, do not require the use of trained personnel to insure quality care during the morbidity period, and yet may not be performed in the physician's office or usual out-patient department. I prefer the hospital-affiliated concept for the inherent ease of quality control, availability of ancillary facilities, and economies of large buying power. Unfortunately, until the basic fiscal policies and management of most hospitals are changed, I feel proprietary ownership provides the Devil's advocate to stimulate necessary hospital economies. An exciting concept would be administration by the central planning agency, or the medical society, or the insuring

agency, or all together in a cooperative approach. I would limit procedures to elective surgery, recognizing that speed, ability, and practice patterns differ amongst physicians. If a list be necessary, a physician should not be required to use such facilities for the listed procedures if he does not so desire. And yet, the ability for prospective acceptance of newer unlisted procedures should be easily attained without bureaucratic impedences. The ultimate quality control rests in the continuing education of all involved and the provision of their services. The initial requirement I would desire would be the need assessment by the health planning agency. The remainder of licensing requirements as suggested in other papers could be negotiated for each geographical area. The implementation at PSRO should also take into consideration the advent of such changing concepts. The role of the federal government I would envision initially as a coordinator and underwriter to assess the effects nationally of such a system of facilities.

The concept of ambulatory surgery is good. Changing techniques in surgery and anesthesia create a much more popular atmosphere among surgeons and patients. Quality control, licensing, and review can be more easily controlled than for hospitals because of the fewer requirements necessary, and the specific mission of these facilities. The low cost of construction relative to in-patient hospital beds creates a source of operating rooms which may be considered disposable as they become out-dated or treatment patterns change. The maintenance of life has developed a very expensive cost. This is one sector where part of the cost can be contained, and, in fact, usually with improved quality of care.



PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in

INDEX MEDICUS giving author (co-authors up to three: et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.

Editorials

THE AMA AND YOU

The American Medical Association is the only organization that represents all physicians. There has been some tendency with the great surge toward specialization to downgrade the AMA in comparison with specialty societies. The far left consider the AMA to be too conservative, and the far right consider it to be too liberal. No organization can bridge these differences to the satisfaction of all. But if the AMA disappeared from the scene, it would have to be invented all over again.

AMA membership currently constitutes about one-half of all physicians in the United States. Why not all? One important reason is that the peculiar federated structure of the AMA permits physicians to belong to their state societies without being members of the AMA. Many states, as is the case with Rhode Island, do not even require state society membership of county or district society members. Such members get a free ride, having the advantages of membership in organized medicine without paying their full share.

The AMA is in financial difficulties, which could be alleviated in large measure if its membership included all practicing physicians. There have been some preliminary activities on the national scene

directed toward unified membership as a requirement for state constituency in the AMA. The California Medical Society submitted a resolution to the June AMA House of Delegates meeting requesting the preparation of bylaws "to provide for active AMA membership for all dues — paying members of state medical societies." The resolution, however, was not adopted.

Action on a resolution requiring unified membership in Rhode Island (county, state, and AMA) which was recently considered by the Rhode Island Medical Society House of Delegates, was deferred because of the possible impact on membership.

At the recent annual meeting of the Rhode Island Medical Society both the retiring president, Doctor Nathan Chaset, and the newly elected president, Doctor Stephen J. Hoyer, expressed vigorous support for the concept of unified membership. Even though the AMA and RIMS dues may rise substantially in the ensuing years, there will probably never be a better time to pursue this desirable goal than right now. Unified membership is long overdue. Let us courageously take this important step forward.



HOPE AND DESPAIR IN PROVIDENCE

More people are content, or fewer are likely to despair to the point of suicide, in Providence, Rhode Island, than in any other city in the United States, according to a recent letter to the editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. In contrast, those beautiful, blissful, balmy cities — Tampa, St. Petersburg, or San Jose — vie with each other as spots where human despair is frequently relieved by one's own hand.

But to treat suicide so lightly disregards scientific reasoning or the multifactoral basis for the observed findings. Cultural backgrounds, religious ethics and age of the population all have a bearing.

However, there is always some truth in old clichés and observations made over the years. In an oversimplification, suicides are apt to occur where the climate is monotonous, and especially if the weather is monotonously clear and beautiful. Change demands accommodation, and activity is the best antidote to boredom and depression.

It should make all Rhode Islanders a little more content to know that, as bad as things are, there is less reason to despair here than anywhere else. And perhaps we should complain a bit less about our New England weather.



PHYSICIANS OPPORTUNITIES

(Continued from page 295)

Walter J. Lentz, M.D.
Medical Center Hospital
Burlington, VT 05401
Internal Medicine
* * *

A. S. Sripathi Karanth, M.D.
Internal Medicine
c/o George D. Vlahides, M.D.
Medical Education Director
Ellis Hospital
Schenectady, NY 12308
* * *

Daniel Blumkin, M.D.
330 Norwalk Road
Springfield, IL 62704
Family Physician
* * *

Richard Kleiner, M.D.
515 West 59th Street
New York, NY 10019
Pediatrician
* * *

Ronald S. Lorfel, M.D.
1505 Vicksburg
Belleville, IL 62221
Ophthalmologist
* * *

Dante A. Rasaga, M.D.
140 Anton Street A-3
Bridgeport, CN 06606
Pathologist
* * *

Vito A. Angelillo, M.D.
1183 South 10th East
Salt Lake City, UT 84105
Internist
* * *

William A. Colom, M.D.
2206 North Pickett Street, No. 304
Alexandria, VA 22304
Internist
* * *

Joseph Manelis, M.D., F.A.C.S.
4044 Stonehenge Drive
Sylvania, OH 43560
Thoracic-Cardiovascular Surgeon
✈ ✈ ✈

**MAKE YOUR VOICE
HEARD IN THE
REVIEW PROCESS**

♦ ♦ ♦

**996 PHYSICIANS
HAVE JOINED**

♦ ♦ ♦

Support R.I.P.S.R.O.



Pro-Banthine®

brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control.

For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE

Searle & Co.

San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action — Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action — Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action — Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine® (propantheline bromide)

a good
option
in peptic
ulcer



**Adequate
fluid
intake**



**Frequent
voiding**

The 3rd Basic

Gantanol[®] (sulfamethoxazole) B.I.D.

four tablets (0.5 Gm each) STAT-
then 2 tablets B.I.D. for 10-14 days

basic therapy with
convenience for
acute nonobstructed
cystitis

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic non-obstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teaspoon) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

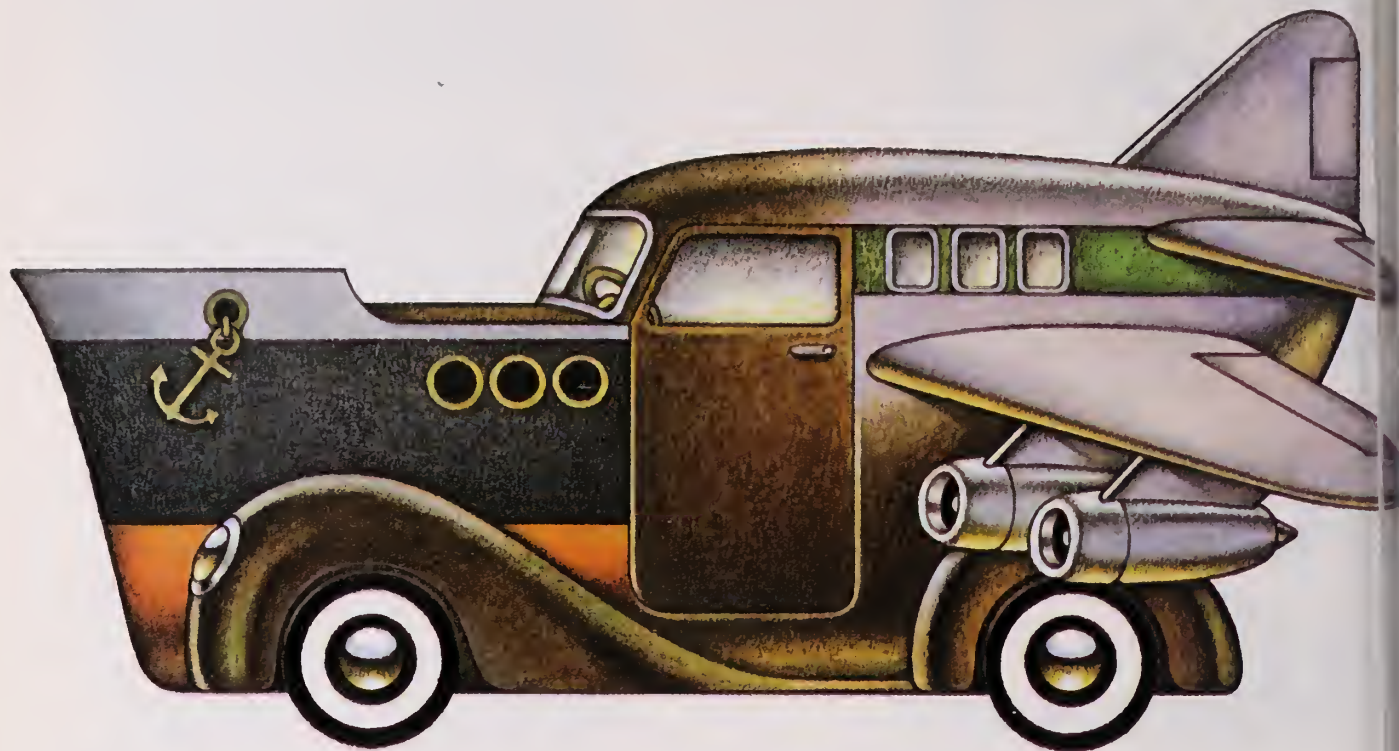
Usual child's dosage: 0.5 Gm (1 tab or teaspoon) / 20 lbs of body weight initially, then 0.25 Gm / 20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg / 24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole / teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

• Effective against susceptible *E. coli*, *Klebsiella-Aerobacter*, *Staph. aureus*, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*



On land, sea, and in the air...

Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.

Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did

not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, use is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 
 A Division of Pfizer Pharmaceuticals
 New York, New York 10017

Antivert®/25 Chewable Tablets
 (meclizine HCl) 25 mg.
 for motion sickness

Fiske Fund Prize Dissertation 1975

The Trustees of the Fiske Fund of The Rhode Island Medical Society announce the following for the Prize Dissertation of 1975:

Rhode Island Medicine in the American Revolution

For the best essay on the subject worthy of a premium they offer a prize of \$1,000. The dissertation will be particularly graded on the basis of original work by the author. The competition is not restricted to physicians. Each competitor for the premium is expected to conform with the following regulations:

To forward to the secretary of the Trustees on or before the fifteenth day of December, 1975, free of all expense, *a copy of his dissertation with a motto thereon, and also accompanying it a sealed envelope bearing the same motto inscribed on the outside with his name and address within.* The author's name should *not* appear on the title page of the manuscript.

Previous to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title and interest in and to the same, for the use, benefit, and advantage of the Fiske Fund.

Dissertations, other than the successful ones, will be returned to the authors.

The dissertations must be typewritten, double spaced on standard typewriter paper and should not exceed 10,000 words.

TRUSTEES, CALEB FISKE FUND RHODE ISLAND MEDICAL SOCIETY

Secretary

Mrs. Helen E. DeJong
106 Francis Street
Providence, Rhode Island 02903

Stephen J. Hoyer, M.D.
Herbert F. Hager, M.D.
Philip J. Morrison, M.D.

LYMPHOMAS IN CHILDREN

(Continued from page 305)

In NHL no clearly optimal treatment has emerged. Because of the characteristic multicentric origin and rapid progression, radiotherapy alone is rarely if ever indicated. Many drugs show dramatic although often only transient effectiveness. A striking, often permanent, regression has been observed with the use of Cytosan® in African Burkitt's lymphoma, but not in the American forms of Burkitt's. In view of the aggressive nature of NHL, intensive multidrug therapy is indicated in all stages of the disease. Regimens resemble those used in HD or acute lymphocytic leukemia and are often combined with irradiation of localized massive disease.

COMPLICATIONS OF TREATMENT

The use of multiple drugs and wide-field radiation not only may depress the bone marrow but may increase the susceptibility to a wide variety of infections (viral, fungal, bacterial). Splenectomy may add to the potential for overwhelming sepsis. Patients must be observed closely, blood counts taken frequently, and infections treated promptly and vigorously.

Perhaps the most common and feared complication of initial therapy, *especially* in NHL with massive adenopathy, mediastinal mass, or hepatosplenomegaly, or a combination of these, is uric acid uropathy: a rise in serum uric acid due to rapid turnover of nucleic acids plus destruction of tumor cells by therapy leading to precipitation of uric acid crystals in the kidney and subsequent renal shutdown. This can be prevented by attention, *prior* to instituting therapy, to hydration, the use of allopurinol, and alkalization of the urine when necessary to reduce the serum uric acid level.

PROGNOSIS

HD: Long-term remissions are common and cures possible in all stages of the disease. Five-year *disease-free* survival rates will likely exceed 90 per cent for Stage I and 60 per cent for Stages II and III, and prolonged *survival* (over five years) for stage IV may be achievable in over 60 per cent of cases.

NHL: Until recently survival for more than 2 years was under 20 per cent. Histiocytic lymphoma (reticulum cell sarcoma) in particular often shows rapid recurrence and spread despite radiotherapy and chemotherapy. Many (perhaps 50 per cent) of the undifferentiated or poorly differentiated lymphocytic lymphomas undergo transformation to acute lymphocytic leukemia. Of these a significant number develop meningeal involvement. These com-

plications are treated by anti-leukemic drug regimens. Improvement in survival seems to be appearing with the current use of radiation combined with intensive multidrug chemotherapy. In one such study 50 per cent of the children remain in complete remission after two years.

FOLLOW-UP

Frequent evaluation during treatment is critical to limit the acute side-effects of chemotherapy and radiation. Compassionate care by a central physician is of great value in deterring the development of serious emotional problems in the child and his family. Life-long follow-up is indicated to detect tumor recurrence or long-term effects of therapy (growth aberrations, sterility, new tumor development).

REFERENCES

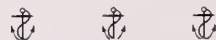
- ¹Aur RJ, Hustu HO, Simone JV, et al.: Therapy of localized and regional lymphosarcoma of childhood. *Cancer* 27:1328-31, Jun 71
- ²Hays DM: The staging of Hodgkin's disease in children reviewed. *Cancer* 35:Suppl:973-8, Mar 75
- ³Hittle RE, Higgins GR: Hodgkin's disease in children. *Pediatric Ann* 3:56, 1974
- ⁴Jenkin RDT, Brown TC, Peters MV, et al.: Hodgkin's disease in children. A retrospective analysis: 1958-73. *Cancer* 35:Suppl:979-90, Mar 75
- ⁵Knospe WH: Malignant lymphoma. 1. Staging and classification. *Postgrad Med* 55:201-6, May 74 (48 ref.)
- ⁶Lascari AD: Lymphosarcoma. *Pediatric Ann* 3:27, 1974
- ⁷Murphy SB, Davis LW: Hodgkin's disease and the non-Hodgkin's lymphomas in childhood. *Semin Oncology* 1:17-26, Mar 74
- ⁸Sonley MJ: Lymphosarcoma in childhood. *Pediatrician* 1:249, 1972/73
- ⁹Sullivan MP: Treatment of lymphoma. *Cancer* 35: Suppl:991-5, Mar 75
- ¹⁰Treatment of Hodgkin's disease. *Med Lett Drugs Ther* 16:69-71, 16 Aug 74



ONE SENTENCE ESSAY

Let us not make a mistake by attempting to create a one-to-one relationship between quality care and liability exposure.

... Don Harper Mills, M.D., J.D.



ONE SENTENCE ESSAY

It would be unfair to say that I prefer the back of a book to its contents, but it is true that the sight of a lot of books gives me the hope that I may one day read them, which sometimes develops into the belief that I have read them.

... Lord Kenneth Clark

THE MUTUAL OBLIGATIONS OF THE MEDICAL PROFESSION AND THE PRESS

(Continued from page 308)

lot more than you think they can. Rely less on broad platitudes. Instead be as specific as you can in clear, concise terms so that a neighbor — in the hospital or in the community — can understand what you are doing, and why.

If it is research, explain the methodology. It's fascinating to most people.

If it is a patient's problem, LISTEN to the questions being asked and try to answer them directly.

Second, let the people at home know why the costs are what they are. Talk to local groups like Kiwanis and other civic organizations at lunch. These meetings often are covered by the local press. If you take the time to explain what you are all about in the beginning, then my hunch is you will have to spend less time defending yourselves later on in the court of public opinion.

Third, there is a need for a more honest approach in the sometimes exaggerated premises and claims made by both journalists and doctors for what medicine can do.

Let me be clear. *This is a two-way street*. Journalists' errors must be corrected by prompt replies from scientists. But scientists' overenthusiasm must be stopped by comments from peers lest there be public overexpectation.

Fourth, journalists must probe more into the way things are done in medicine.

Because much research and patient care is publicly funded, and because we are a society with limited resources, costs have become critical. One function of journalism is to cut down on waste and to help improve efficiency.

Fifth, and not the least important, doctors must learn that it is honorable to speak out to the press, to provide facts, to correct errors, and to give reasonable testimony on controversial issues. Stop looking at those who do it honorably as publicity seekers. Leaders of various medical and scientific groups should comment when the topic touches on public welfare. If you do not meet your responsibilities, you will continue to subject yourselves to a selecting-out process. As long as the responsible leaders keep silent, the quacks and charlatans will fill the vacuum.

There are many sides to complex, public issues. Under our system of government, they are settled in the political arena — and by that I mean by the

public-at-large, the taxpayers and the people whose health you seek to improve. Your best bet is to speak forcefully and honestly the first time because the first story often has the greatest impact. Silence may be golden, but if the public hears only one side of an issue, it may never know about the other.

In the final analysis, it is the American public that wants the best possible health care to meet its needs.

Bear in mind that the press can be an ally. The times and reasons are different. But the principle is not. Don't overlook what Doctor Waterhouse said 175 years ago.

REFERENCES

¹Waterhouse B: The history of the kine-pox, commonly called the cow-pox. In Rapport S, Wight H (eds): *Great Adventures in Medicine*. New York, Dial Press, 1952, p 171-5.

²Beaumont W: *Experiments and Observations on the Gastric Juice and the Physiology of Digestion*. New York, Dover Publications, 1833 edition, reprinted 1959.

³Altman LK: The Finding of Insulin 50 Years Ago Recalled. *The New York Times* Sunday, June 20, 1971, p 42.

⁴Nelson H: The press and us. *S Afr Med J* 44:95-6, 24 Jan 70.



UNIVERSITY HEALTH SERVICES

AVAILABLE IMMEDIATELY

General physician, student health, campus, rural setting, near Narragansett Bay, one-half hour from Providence; calendar year appointment; Equal Opportunity; Affirmative Action Employer. Write Mr. Barry Solomon, Director of Health Services, URI, Kingston, R.I. 02881 or call (401) 792-2246.

PHYSICIAN'S OFFICE FOR RENT

RUMFORD — RESIDENTIAL SECTION

FIRST FLOOR — 5 OR 6 ROOMS

FORMER FAMILY PHYSICIAN'S 19 YEARS

Call Evenings 521-6738

BLUE SHIELD—FIFTEEN YEARS

(Continued from page 312)

you can safely bet your bottom dollar that it is coming.

All Blue Shield plans must be prepared to play a role as carrier or intermediary or whatever role it might be under national health insurance. The National Association of Blue Shield Plans has spent significant time and resources preparing itself for this eventuality.

You here will be deeply involved in national health insurance after my departure, and you should be ahead of it in your thinking, planning, and experimentation and research. You do not want to be in the position of being left out of the action or in the position of having to catch up. I can assure you at this time, Blue Shield of Rhode Island is, as President Arthur F. Hanley says, "on top of it."

BLUE SHIELD PLANS AND ENROLLMENT FIGURES

In 1960 Physicians Service, as it was known officially until 1974, offered only Plan A and Plan B, both of which were service programs for only that portion of the population whose income

was below the prescribed income limits of these plans.

At that time 440,000 people or 77 per cent were enrolled in Plan A, and 135,000 people or 23 per cent in Plan B for a total enrollment of 578,000. Today, the total enrollment under Blue Shield is 757,000, which is 85 per cent of the eligible population of the state. Sixty-two per cent are now enrolled under Plan 100, which became available in 1969, 36 per cent in Plan B, and only 2 per cent remaining in Plan A, with, of course, the vast majority of the people in these latter two plans having annual earnings above the income limits, the words "service benefits" become almost meaningless.

In 1962 Major Medical was introduced and jointly underwritten by Blue Cross and Blue Shield. Last year, 1974, a single Major Medical contract was for the first time offered to small groups and direct pay subscribers with a \$100 deductible which pays 80 per cent of reasonable and customary charges up to a lifetime maximum of \$25,000.

Today 75 per cent of all enrollees under age 65 are protected by a Major Medical policy, and many of these have maximum coverage extending to a quarter of a million dollars.

Plan 65, the gap filler, covering the deductibles and co-insurance provisions not covered under Medicare for those over 65 has an enrollment of 76,000, or 74 per cent of those people under the Medicare program.

CONCLUSION

What I have attempted to do this afternoon in this rather lengthy but sketchy account of some of the important events of the past fifteen years is to highlight some of the social forces beyond our control that have compelled Blue Shield to change its course in order to remain the leader in the prepayment health field. This has been systematically accomplished with the knowledge and intuition of an experienced crew which includes staff, the board of directors, committee members, and the medical profession.

The finish line may never be in sight. Many new and challenging decisions will continue to appear on the horizon. However, I am convinced, because of your demonstrated past ability, you are capable of steering a proper course. It will be fun for you to be aboard.



PROFESSIONAL OFFICE SPACE FOR RENT

(In planning stage, for completion
Spring, 1976)

APPROXIMATELY 2,000 SQ. FT.
BROADWAY, PROVIDENCE

For Details:

Contact Joseph DiZoglio, M.D.
Edward Cardillo, M.D.
358 Broadway
Providence, RI
Tel. JA 1-2030

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON. Phar. D.
RAYMOND E. JOHNSTON. B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

Hirsch Loeb Gordon, M.D. 1896-1969

Made Noteworthy Contributions To Several Disciplines

By Harry A. Savitz, M.D.

Doctor Hirsch Loeb Gordon was a versatile scholar, who mastered several disciplines of learning, as evidenced by the number of academic degrees that adorn his name like medals on the lapel of a famous general. He was a prolific writer and the author of several books. He was skilled in several languages, including English, Hebrew, Yiddish and Italian.

EARLY YEARS IN EUROPE

He was born on November 26, 1896 in Vilna, Russia — the Jerusalem of Lithuania — a dynamic Jewish cultural center. His father, Elijah Gordon, a profound scholar, who wrote four books dealing with homiletics and legalism, then became Rabbi of the city, and later in the United States. In his youth Hirsch received the traditional Jewish education in the elementary Hebrew school — the *Heder* and continued his studies in the famous rabbinical seminaries of Slobodka, Lyda, and Volozhin. These were the nurseries of many erudite Hebrew scholars who later accepted chairs of learning in the outstanding universities of the United States.

Hirsch Gordon was graduated from the Institute of Jewish learning in Odessa in 1914. It is related that as a student in Odessa he suffered great poverty, but his lack of sustenance was compensated for by the friendship of the famous Hebrew Poet Laureate, Chaim N. Bialick, who at that time lectured at the Institute. Gordon was entranced by Bialick and absorbed every word while taking

HARRY A. SAVITZ, M.D., *Physician-in-Chief
Emeritus, Hebrew Rehabilitation Center.*



Dr. Gordon as Health Service Officer

notes. The poet befriended his admirer, and their friendship flourished.

Gordon reported the contents of the lectures to the Hebrew daily, *Ha-Zephira*, and in return received fan letters from the editor, Nahum Sokolov. For lack of funds Gordon lived in a poor neighborhood in a miserable dwelling. On one occasion he heard a knock on the door and asked in Russian, "Who is there?" "I am Sokolov," was the answer, "and I am looking for Mr. Gordon." Ashamed of his poor abode, Gordon replied, "Mr. Gordon does not live here."

In 1910 at the age of fourteen Gordon entered the famous rabbinical seminary (*Yeshivah*) at Volozhin, a great center of Talmudic learning. Students came from everywhere to study there, but the mere study of the Talmud and its commentaries and complexities did not satisfy Hirsch Gordon. His thirst for knowledge led him secretly to read many secular books, magazines, and articles in the Russian language. He was particularly attracted to Leo Tolstoy's works. Quietly he pursued his secular studies and prepared himself to enter the Russian Gymnasium (secondary school). At the same time

(Continued on next page)

he was busy with other activities, including Zionist fund-raising groups. Under the pseudonym of "Gil" he published an article in *Ha-Zeman* (Hebrew Daily) on the status of education in the Volozhin Yeshivah.

EMIGRATES TO AMERICA

He came to the United States in 1915 and became a citizen in 1922. Here in the land of freedom and opportunity he toiled in several fields of learning, mastered several disciplines, and succeeded in accumulating more academic degrees. He was a perpetual student, and his thirst for knowledge had no limit. In 1922 he received a Ph.D. degree in Semitics from Yale University; he also studied medical history there under Castiglioni. In 1923 he received an M.A. degree in international law at American University, a Doctor of Humanities in Egyptology from Catholic University and in 1926 an M.A. in psychology at Teachers College of Columbia University. He received his M.D. degree at the University of Rome in 1934, and also a Doctor of Letters in classical archeology from the same University. He was a diplomate of the Institute of Legal Medicine in Rome and a Doctor of Hebrew Studies in Talmud from the Jewish Theological

Seminary in New York in 1938. He was not satisfied with one profession, but wanted to absorb and embrace several, like a bee that flies from flower to flower to produce honey. His abundant learning bore fruit, and he became a prolific writer. He was the author of many literary and scientific articles as well as several books. Included among his writings were a book on shock therapy, an article on the basilica and the stoa, and a paper which detailed psychological concepts in the Bible, Talmud, and Zohar. He translated from the Arabic a medieval work by Moses Maimonides titled "The Preservation of Youth." He published an article in Hebrew on "Autopsies according to Jewish Law," including an historical review of post mortem examinations.

AUTHOR

But his *magnum opus* was a book titled "The *Maggid* of Caro" (Pardes Publishing Company, New York, 1949). Here is how it came about. On January 31, 1942 Gordon read a paper on "The *Maggid* of Caro" before the Hebrew-speaking Medical Society of New York City. It was discussed by Professor I. S. Wechsler of Columbia University and Professor Arturo Castiglioni of Yale University. Doctor Gordon, believing that the topic of "*Mag-*

MEDICAL MALPRACTICE INSURANCE

Feel free to call for information on the Medical Malpractice Joint Reinsurance Plan

Contact: LEN DiPRETE

DUNCAN B. CAMPBELL CO.

Wayland Square, Providence, R.I.

751-3312

DOCTOR'S MALPRACTICE INSURANCE — LAWYERS MALPRACTICE INSURANCE

UMBRELLA LIABILITY COVERAGE

AUTO — HOME — BUSINESS — LIFE — INSURANCE

LEONARD R. DiPRETE

Insurance — Real Estate

*gidim**” would prove to be of interest to students of psychology and psychiatry, expanded his paper into a book. The book is the story of Joseph Caro (1488-1575), who was an eminent Talmudic scholar and codifier of rabbinic law. Born in Toledo, Spain, he was exiled with his family in 1492. After much wandering they settled in Safed, Palestine, where Joseph later founded a “Yeshivah” (Hebrew Academy) and wrote his code, “Beth Joseph (the House of Joseph)” and its classical abbreviation the *Shulkan Aruch* (the prepared table) in Safed in 1564-5.

The *Shulkan Aruch* was a collection of the views of previous codifiers and Caro’s decisions in disputed points. He was interested in Kabbalah — mysticism — and was greatly influenced by it, so much so that he claimed that religious secrets were revealed to him by an angel (the *Maggid*). There are a number of comments in the book about the *Maggid*. The scientist Albert Einstein had a logical explanation of revelations of this type. He felt that a new idea comes suddenly in a rather intense way — intuition is nothing more than the outcome of accumulated earlier intellectual experience.

PHYSICIAN

As a physician, Doctor Gordon had his own explanation of Rabbi Caro: “It was his ambition to become that supreme authority — to become president of that seat of learning. To justify his wish, high appraisal of his person rose to the surface of his consciousness. To be sure, such pretensions on the part of Caro were not crowded with the halo of ordinary modesty. But while a great man may affect outward humility and meek behavior, he cannot silence within his soul the triumphant voice of his true eminence and power.” How true-psychologically — as is illustrated by the arrogant man who ever boasts of his humility.

Gordon led a full and active life professionally. He attended the Neurological Clinic of Mount Sinai Hospital of New York beginning in 1935, and later also at Maimonides Hospital in Brooklyn, the Pilgrim State Hospital in Brentwood, Long Island, and the Bellevue and Kings County Hospitals in New York and Brooklyn.

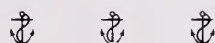
In World War II he served as a Major in the Army Medical Corps and was chief of shock therapy at the Veterans Administration Hospital in Northport, New York. In 1947 he was chief neuropsychiatrist for the Veterans Administration at

Jacksonville, Florida and later was neuropsychiatric consultant to the Surgeon General of the Army. This was followed by duty in the Public Health Service as senior surgeon, and then as chief of neuropsychiatry at the Marine Hospital on Staten Island. In 1951 he became a member of the Board of Appeals for the New York State Selective Service.

Doctor Gordon was a fellow of the American Geriatric Society of the American Psychiatric Association, and of the American College of Physicians, and was a member of the New York Academy of Medicine. In 1967 he received the Maimonides Award given by the Michael Reese Hospital and the College of Jewish Studies both of Chicago (awarded to a physician chosen either from this country or from abroad who has contributed substantially to both Medicine and Judaica). In 1968 he received the American University Alumni Award.

SUMMARY

Doctor Hirsch Loeb Gordon was a versatile scholar, psychiatrist, historian, author, and journalist, proficient in English, Hebrew, Yiddish, and Italian. He was the recipient of degrees in several disciplines and made noteworthy contributions to each of them.



Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
HOpkins 7-8050

PRIME OFFICE SPACE FOR LEASE PAWTUCKET OPPOSITE MEMORIAL HOSPITAL

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

CALL ALLIED INVESTMENT
434-2974 or 433-0759

*Heavenly spirits or agents. Magid is singular.

Report Of The Committee On Drug Abuse

Cooperation Among The Medical Society, The Board Of Medical Examiners, And The Health Department Is Vital

In September of 1973, a meeting had been held with the Division of Drug Control personnel from the State Department of Health and the pharmacists in charge of monitoring prescriptions for Department of Social Service Rehabilitation Hospitals. The meeting was called to discuss the misuse of prescribing practices by physicians in Rhode Island. As a result of this meeting, which had been previously recorded, the Committee presented the information to the Executive Council which in turn directed the President of the Society and the Chairman of the Committee to meet with the Division of Drug Control in order to work out ways in which the Society could cooperate with them in eliminating these practices. Because of a series of circumstances, the meeting was not held until April 23, 1975. Prior to the meeting, the research of the committee revealed that one of the difficulties in this cooperative effort would be the legal restriction on the Division's divulging actual names of offending physicians to the society when these physicians were under investigation. Further research revealed that at least one state, Illinois, had devised a method in which hypothetical cases were used as a presentation to a medical grievance committee. Correspondence was maintained with the Illinois Medical Society and at the meeting with the Director of the Department of Health which was attended by two members of his Division on Drug Control, both executives of the Society and Doctor Nathan Chaset, Past President of the Society, this hypothetical model was presented to the Division as one way in which we could cooperate.

After much discussion, the meeting concluded with the following points of agreement:

1) That the Society, through its Grievance Committee, would offer to the Division of Drug Control a mechanism of previewing possible situations which could result in submission of cases to the Board of Medical Examiners. This would involve a preliminary opinion whether the alleged practice was within the scope of accepted medical practice.

2) It was felt that there was a lack of communication between the Board of Medical Examiners and the Medical Society concerning whatever disciplinary actions the Board of Medical Examiners take in individual situations. It was agreed that communication would ensue about such actions so the Medical Society in turn could invoke whatever disciplinary actions it deemed fit.

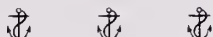
3) The Health Department felt that it would be valuable to have some guidelines for the usage of various abusable drugs in order to establish in the minds of practitioners mutually acceptable practices and help provide the Health Department with some broad guidance in deciding if a prescription practice is within the usual scope of medical practice. It was pointed out to them that the AMA had provided guidelines for the usage of barbiturates and that the Rhode Island Medical Society is currently providing guidelines for the usage of psychoactive medications in children. The Society of Internal Medicine, Rhode Island Chapter, and the Family Practice Society are embarking on prepar-

ation of guidelines for usage of amphetamines in the treatment of obesity.

4) There was difficulty in obtaining expert medical opinion in grand jury deliberations on the proper and accepted use of controlled substances. Doctor Chaset felt that the Society could try to obtain for the Division a pool of expert medical witnesses for this purpose. He emphasized that the Society was strongly and emphatically desirous of eradicating the misuse of prescribing practices as a problem in this state. It was mutually understood that this problem involved less than one percent of practicing physicians in the state of Rhode Island but that this small number could create a minor epidemic of controlled substance abuse and that the Society wanted the state administration to be aware that it would cooperate to its fullest extent to eliminate this problem. It should be noted in this regard that as far as investigations for misuse of prescribing practices that there are two separate enforcement entities involved. That is, the local narcotics enforcement officers in municipal police departments and the sometimes separately operating group from the Division of Drug Control. Within the past few months a third enforcement area has

become operative; this is the L.I.U., the federal agency which operates under the Law Enforcement Administration Act. In the state of North Carolina, for instance, this particular independently operating body has resulted in the indictments of nineteen physicians. The Drug Abuse Committee would, therefore, like to reemphasize how important it is to follow the letter of the law in using prescribing powers involving controlled substances. Despite the good offices of the leadership of the House of Representatives and the sponsoring author of the original proposal of the revised Controlled Substances Act of 1973, we were unable at this session of the legislature to eliminate the provision on the reporting of continued usages of controlled substances. It appears that the only recourse that we have left is to participate in a class action suit along with the ACLU to eliminate this gross invasion of patients' privacy. The Committee shall seek the advice of the Executive Council on this particular course of action.

JOHN E. FARLEY, JR., M.D.
Chairman
Drug Abuse Committee
R. I. Medical Society



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU of the Providence Medical Association

How about an extra \$12,500 every year?



(And the chance to practice medicine at its professional best?)

We offer both.

The \$12,500 bonus you can get immediately.

The high degree of professionalism you'll find throughout your career in Air Force medicine.

In the Air Force you'll have the opportunity to practice health care at its innovative best. You won't have to consider the patient's ability to pay for treatment. At the same time, you won't have to worry about supplies, equipment, insurance, and other details that take your mind and time away from medicine.

In the Air Force you'll earn excellent pay (both officer's and professional pay). You'll also get 30 days of paid vacation each year with the opportunity to travel to Europe, the Far East and other parts of the world.

In the Air Force you can practice the most sophisticated health care. And now you can get a healthy \$12,500 bonus every year to do it.

Get the details about opportunities open

to young doctors in Air Force medicine. Just fill out the coupon.

Medical Recruiting Office
123 Main Street
Milford, CT 06460
Tel: (203) 878-0117

Please send me more information about becoming an Air Force physician.

Name _____

Address _____

City _____

State _____

Zip _____

Telephone _____

Age _____ Specialty _____

**A Healthy Bonus.
Professionalism.
Air Force Medicine.**

Disruptive anxiety usually meets its match here.

Often effective when reassurance and counseling are insufficient. Three dosage strengths to meet most therapeutic needs.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions:

ORAL: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six.

INJECTABLE: Keep patients under observation, preferably in bed, up to three hours after initial injection; forbid ambulatory patients to operate vehicle following injection; do not administer to patients in shock or comatose states; use reduced dosage (usually 25 to 50 mg) for the elderly or debilitated and for children age twelve or older.

ORAL AND INJECTABLE: Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating compounds such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual



precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduc-

tion; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. **Oral: Adults:** Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* **Geriatric patients:** 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

Supplied:

Oral: Librium® (chlordiazepoxide HCl) Capsules—5 mg, 10 mg, 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50, available singly and in trays of 10.

Libritabs® (chlordiazepoxide) Tablets—5 mg, 10 mg and 25 mg—bottles of 100 and 500.

Injectable: Librium® (chlordiazepoxide HCl) Ampuls—Duplex package consisting of a 5-ml dry-filled ampul containing 100 mg chlordiazepoxide HCl in dry crystalline form, and a 2-ml ampul of Special Intramuscular Diluent (for I.M. administration). Before preparing solution for I.M. or I.V. administration, please consult package insert for instructions on preparation and administration of solutions. Boxes of 10.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Librium® (chlordiazepoxide HCl)

5 mg, 10 mg, 25 mg capsules

Please see following page.

Disruptive anxiety usually meets its match here.



Librium®

(chlordiazepoxide HCl)

5 mg, 10 mg,
25 mg capsules



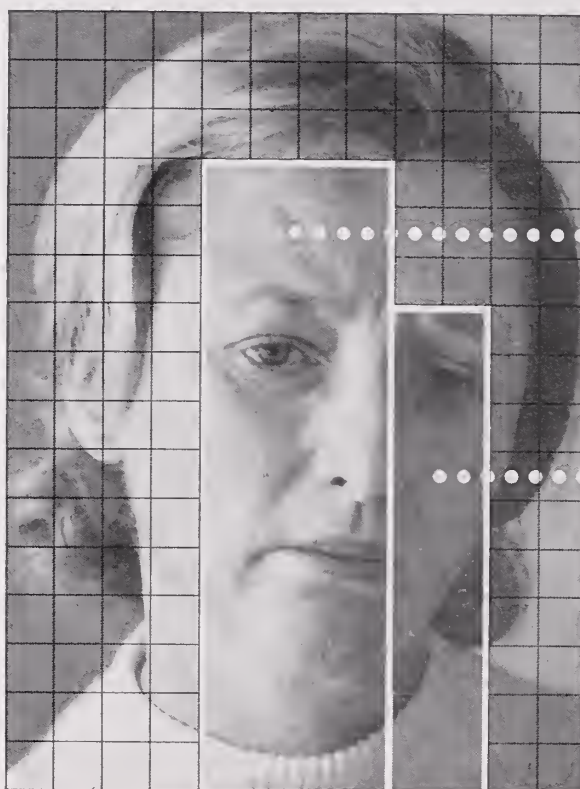
Please see preceding page for summary of product information.

August 1975
R.I. Medical Journal
Vol. 58 No. 8

BALCONY



Both often



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures require increased dosage of standard convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuation (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Use with caution in alcohol addiction-prone individuals under care.

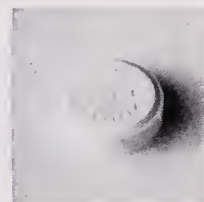
respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®]
(diazepam)
2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

AUGUST, 1975

VOLUME 53, No. 8

EDITORIAL STAFF

Editor-in-Chief	Seebert J. Goldowsky, M.D.
Managing Editor	Timothy B. Norbeck
Ass't Managing Editor	Lance D. Taylor
Managing Editor Emeritus	John E. Farrell, Sc.D.

John F.W. Gilman, M.D., Chairman
*John A. Dillon, M.D., Acting Chairman
*Stanley M. Aronson, M.D.
*Bertram H. Buxton, Jr., M.D.
Robert P. Davis, M.D.
*Herbert Fanger, M.D.
Pierre M. Galletti, M.D., Ph.D.

*Charles A. Hall, Jr., M.D.
Robert V. Lewis, M.D.
*Peter L. Mathieu, M.D.
*Jay M. Orson, M.D.
Henry T. Randall, M.D.
*Guy A. Settippane

(*Also Member Publications Committee)

TABLE OF CONTENTS

A UNIFIED CONCEPT OF THE EPIDEMIOLOGY AND ENDOCRINOLOGY OF BREAST CANCER	
Leonard J. Triedman, M.D., and Michael J. Weaver, M.D.....	341
SURGICAL TREATMENT OF ANGINA PECTORIS	
Karl E. Karlson, M.D., Ph.D.....	345
USING PSYCHIATRIC CONSULTATION LIAISON SERVICE	
John R. Ruggiano, M.D.	347
THE DEVELOPMENT AND FUTURE PROSPECTS OF FAMILY PRACTICE TRAINING IN RHODE ISLAND	
Robert P. McCombs, M.D.	349
BOOK REVIEWS	368
EDITORIALS	351
EDITOR'S MAILBOX	352
MESSAGE FROM THE DEAN	329
REPORT OF THE HOUSE OF DELEGATES	361

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island, Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302 Ph:AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

MEDICAL EVENTS CALENDAR

SEPTEMBER

- 10 Opening Ceremonies for the New Family Care Center and Residency Program, The Memorial Hospital. "Family Practice in the Provision of Primary Health and Medical Care," Charles A. Janeway, M.D., Professor of Pediatrics, Harvard Medical School. 3:00 p.m., Auditorium, The Memorial Hospital. Open house in Family Care Center will follow.
- 19 "Recent Advances in Pediatrics," Sydney S. Gellis, M.D., Professor and Chairman, Department of Pediatrics, Tufts University School of Medicine. 10:30 a.m.-12:00 noon, Kay Auditorium, Roger Williams General Hospital.
- 25 "The Cost of Preventing Retrolental Fibroplasia," Dr. Kenneth W. Cross, Department of Physiology, The London Hospital Medical College. 10:00 a.m., WIH Auditorium, Women and Infants' Hospital.
- 25 18th Annual Murray S. Danforth Oration, Albert B. Ferguson, Jr., M.D., University of Pittsburgh. 8:30 p.m., George Auditorium, Rhode Island Hospital. Additional related activities will take place September 25-27; information on these will be available from Rhode Island Hospital.
- 30 "Basic Immunology for the Practicing Physician," a twelve-week course to be held Tuesday evenings beginning September 30, from 7:30 p.m.-9:00 p.m. in conference room 119 of the Bio-Medical Center, Brown University. Registration is limited to 30 physicians, and is required by September 19, 1975. Tuition will be charged and will include advance and follow-up materials and coffee during discussion periods. To register, call Mrs. Allen, 863-2815, or write to Continuing Medical Education, Box G, Brown University, Providence 02912.

OCTOBER

- 8 "The Use of Anti-Neoplastic Agents in Non-Neoplastic Disease," a one-day symposium featuring Brown University faculty. 8:30 a.m.-4:00 p.m., Andrews Hall, Brown University. This program has been approved for 6½ hours of credit from the AAFP. A registration fee will be charged. For information, call 863-2815.
- 10 "The Physiology and Treatment of Hypertonic Dehydration in Infants," Laurence Finberg, M.D., Professor and Chairman, Department of Pediatrics, Medical Center of the Albert Einstein College of Medicine. 10:30 a.m., Kay Auditorium, Roger Williams General Hospital.

- 16 "The Nature and Uses of Behavior Modification Therapy," John Paul Brady, M.D., Chairman, Department of Psychiatry, Hospital of the University of Pennsylvania. 4:30-6:00 p.m., Ray Hall, Butler Hospital. This is part of the Annual Butler Hospital Grand Rounds Series; a small admission will be charged. For information, call 521-3400.
- 20 "Behavior Modification Applied to a County Mental Health Center: A Demonstration Project," William Goodson, M.D., Associate Clinical Director, Huntsville, Alabama. 4:30-6:00 p.m., Ray Hall, Butler Hospital. See October 16 listing.
- 23 "Assertiveness Training," Eileen Ganbrill, Ph.D., Lecturer, School of Social Welfare, University of California at Berkeley. 4:30-6:00 p.m., Ray Hall, Butler Hospital. See October 16 listing.
- 31-Nov. 1 "Recent Advances in Medicine," American College of Physicians Annual Regional Meeting. Friday sessions at Colonial Hilton Inn; Saturday morning sessions at Barus-Holley Hall, Brown University. All physicians, residents, interns, and medical students are invited; small registration fees will be charged to practicing physicians only. Advance registration is required. This program has been approved for 9 hours of category 1 credit towards the AMA Physician's Recognition Award, and 9 hours credit from the AAFP. For information, call 863-2815.

FUTURE EVENTS

NOVEMBER

- 5 "Advances in Pediatric Diagnosis and Therapy," The Twelfth Annual Maurice N. Kay Pediatric Symposium. 9:00 a.m.-5:00 p.m., Kay Auditorium, Roger Williams General Hospital.
- 22 "Hematologic Problems in Surgery," presented by the Brown University Section on Surgery. 8:30 a.m.-12 noon, George Auditorium, Rhode Island Hospital.

The Calendar of Events is prepared by the Office of Continuing Medical Education Brown University, Program in Medicine. Events to be listed must be received in writing by the 10th of each month for publication in the next monthly issue. Please indicate if a registration fee will be charged.

Address correspondence to: Continuing Medical Education, Box G, Brown University, Providence, RI 02912.



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

CONVERSATIONS BETWEEN THE CLERGY AND PRACTICING PHYSICIANS

Contemporary realities have tempered the older view that physicians, alone amongst those concerned, are uniquely capable of rendering appropriate assistance to the sick. The medical profession in recent years has come to accept, indeed welcome, the partnership role fulfilled by qualified members of the allied health professions and the ministry. Nurse-practitioners, physician-assistants, respiration therapists, physiotherapists, and numerous other professionals have begun to share with physicians the responsibility of personally ministering to those deprived of health.

The medical profession in the past has generally acknowledged some role exerted by the clergy in this area, but physicians have typically contended that members of the clergy should confine their health-related activities to the rendering of solace to the bereaved or the administering of various rites in response to the expressed desires of the patient and the tenets of his faith. This view has undergone substantial revision in recent years as many physicians have come to recognize and encourage the significant contributions that can be achieved by clergymen in relating closely with hospitalized patients and their families.

Informal conversations designed to explore the scope of potential cooperation and the interface between medicine and the pastoral ministry began last year between members of the Brown University chaplaincy service and the medical school. These dialogues were gradually enlarged to incorporate representatives of the Diocese of Providence, the Rhode Island Council of Churches, and the Rhode Island Board of Rabbis. Since hospital chaplaincy was one of the subjects of the inquiry, the circle of participants was enlarged to include the senior administrators of many of the larger hospitals in Rhode Island. These various discussions have recently culminated in the creation of an Interfaith

Health Care Ministry (IHCM) with representation from many of the hospitals of Rhode Island as well as leaders of the major religious faiths in the State, and from the Program in Medicine at Brown University. Chaplain Charles Baldwin has been chosen to direct the IHCM during its initial ventures. The avowed purpose of the IHCM is to aid in the improvement of patient care by means of new programs which might facilitate interprofessional working relationships in the health care delivery field, develop more effective chaplaincy services in health care institutions and provide limited clinical training for some members of the practicing clergy.

The first tangible product of these ecumenical endeavors began on June 23, 1975, with a five day program entitled, *An Introduction to Hospital Health Care Systems*. Fourteen clergymen from the State of Rhode Island (including practicing ministers from the three major faiths) registered for this educational experience. The resources or staffs, or both, of the Veterans, Butler, St. Joseph's, Rhode Island, Miriam, Women and Infants, and Roger Williams General Hospitals, as well as Hallworth House, constituted the classroom base for a brief but intensive "internship."

The participating clergy were introduced to all aspects of hospital activity and took part in clinical rounds, diagnostic evaluation sessions, direct patient interviews, operating room procedures, deliveries, neonatal care, and various aspects and phases of nursing from intensive to chronic care, including the logistics of various specialized units. The medical, managerial, and fiscal components of inpatient and outpatient care were explored with the clergy.

The curriculum of this week-long course also included daily seminars on areas of mutual concern to the pastoral and medical professions. Issues such as psychological response to illness, personal re-

(Continued on next page)

sponse to dying, bereavement, policy-making in health care institutions, alcoholism, the financing of health care and health education, and, finally, the role of the clergymen in health care were reviewed and constructively debated.

Large numbers of hospital administrators, practicing physicians, hospital personnel, and Brown University faculty contributed to this inaugural program. It is estimated that over 100 volunteers were involved in the various seminars, teaching sessions, demonstrations, and other educational exercises. The working committee which designed the program was chaired by Doctor Ralph Redding and included Doctors Robert Michel, Ben Vogal, and David Barlow, and Chaplain Rick Marker.

At the completion of this program the clergy were asked to write candid evaluations of the program. A review of their statements indicates that they regarded the introduction to *Hospital Health Care Systems* as an effective, well-organized, and creative effort, and they urged that it be made a annual or biennial tradition in Rhode Island.

The expanding complexities of institutional medicine make it increasingly difficult for the parish or congregational clergyman to find an appropriate role in providing personal support for the patient seeking his guidance. A vast array of sophisticated instrumentation and technical procedures often intervenes between the hospitalized patient and the clergy, serving at times to discourage the minister, priest, or rabbi. We will have deprived our patients of a potential spiritual resource if we do not find ways of educating the concerned clergy regarding the daily mechanics of hospital life. An increasing awareness and understanding of hospital medicine, with all its technical and administrative complexities, will diminish the barriers between the clergy and their patients. The recently completed hospital-based course may be an effective step in this direction.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs
Brown University



ANNOUNCEMENT

THE FIRST MID-WINTER VIRGIN ISLANDS CLINICAL CONFERENCE will be held in St. Thomas, January 29, 30, 31, 1976 by the U.S. Virgin Islands Medical Society in association with the Faculty of the University of Pennsylvania School of Medicine.

This program is acceptable for 14 credit hours in Category 1 for the Physician's Recognition Award of the AMA, and will include lectures and seminars of interest to the physician in General Practice, Internal Medicine, General Surgery and OB-Gyn.

For further information, write AIRMAIL to:

Harold A. Hanno, M.D., F.A.C.P.
Secretary
U.S. Virgin Islands Medical Society
Box 1442
St. Thomas, Virgin Islands 00801

MAL- PRACTICE QUESTIONS ???

**Depend on
Starkweather & Shepley
for the answers
and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.



ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

55 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900

Hopkins

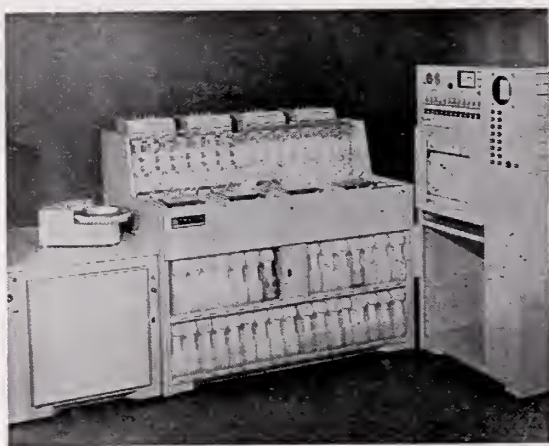
Profile "20"

Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D

DONALD MATTERA
B.S. M.T. (ASCP)

HEALTH HAVENS

A SKILLED NURSING HOME
MEDICARE PARTICIPATING



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence

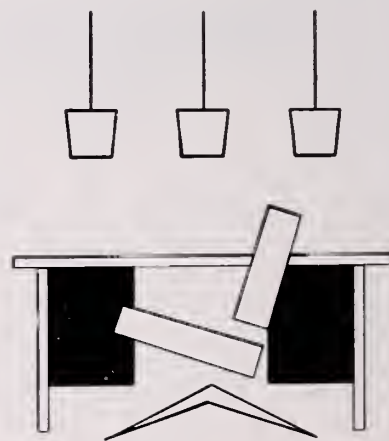
Tel. 438-4275

JCAH Accredited

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
Gaspee 1-5228

Pretend it's 1945. Would you invest in Kodak?



When it comes to making investment decisions, there's nothing like 20 or 30 years' hindsight.

And when it comes to judging the performance of your investments, it's the long term that counts.

The life of a trust represents years of investment decisions whose cumulative effect is far-reaching. And the record of Industrial National Bank's Trust Department is your best assurance that that effect will be a positive one.

We take a back seat to no one in the business of professional

financial management. And we're proud of our consistent long-term performance record.

In fact, we'd like to discuss that record with you, and to show you how our combination of the right people, the right philosophy, and the right organization can bring a realistic new performance orientation to the management of your investments.

Call Mr. Evans at 278-6607. Trust Department, Industrial National Bank, 100 Westminster St., Providence, Rhode Island 02903.

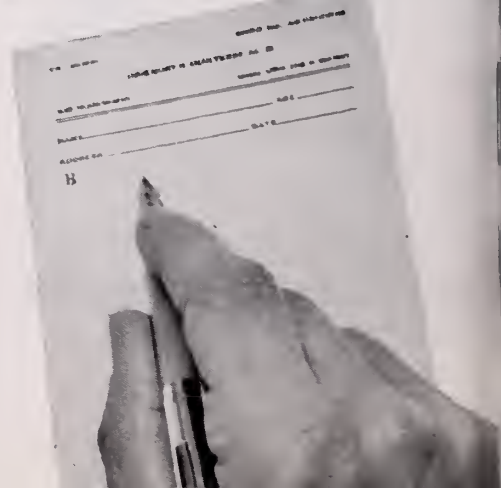
IN BANK

Industrial National Bank

Something extra in Investment Management.



Bioequivalence



the weight of scientific opinion:

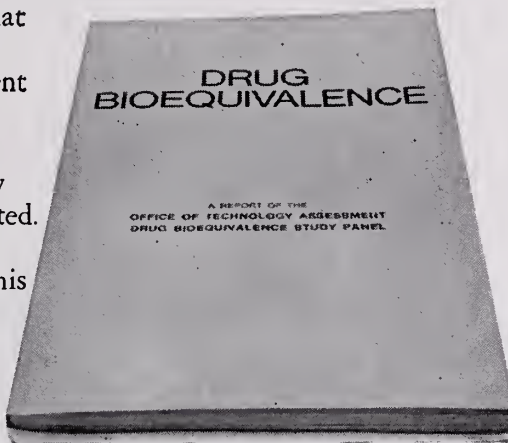
If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content is the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioequivalence in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription



R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.

TASCA
ABC
PLAN



PAIN RELIEF FOR THE MAJORITY

NO.4—for pain intensity below the need for injectables

As a rule, only pain that requires morphine is beyond the scope of Empirin® Compound with Codeine No. 4. That's because it delivers a full grain of codeine. (In the preferred phosphate form.) Its antitussive action is particularly appreciated by patients with fractured ribs, and following chest or abdominal surgery. Its low addiction liability is a bonus for all patients who require potent analgesia.

NO.3—for almost all other kinds of lesser pain

Most other kinds of lesser pain respond to Empirin Compound with Codeine No. 3—whether musculoskeletal, neurological, soft-tissue or visceral. One might say No. 3 is an "all-purpose" analgesic — not too little, not too much. Just right for your out-patients in these categories.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

BURNS

Wherever it hurts

EMPIRIN® COMPOUND 2 CODEINE

No.3, codeine phosphate*(32.4 mg) gr 1½ · No.4, codeine phosphate*(64.8 mg) gr 1

*Warning—may be habit-forming.

Each tablet also contains aspirin gr 3½, phenacetin gr 2½, caffeine gr ½.

The Clinical Diabetes Association of Rhode Island

presents

ADVANCES IN DIABETES MELLITUS

"THE ROLE OF GLUCAGON IN DIABETES MELLITUS"

Philip Felig, M.D.
Yale University School of Medicine

"THE LIVER AND DIABETES MELLITUS"

Charles Trey, M.D.
Harvard Medical School, Boston, Massachusetts

Wednesday, October 8, 1975

10:00 a.m.-12:00 noon

KAY AUDITORIUM

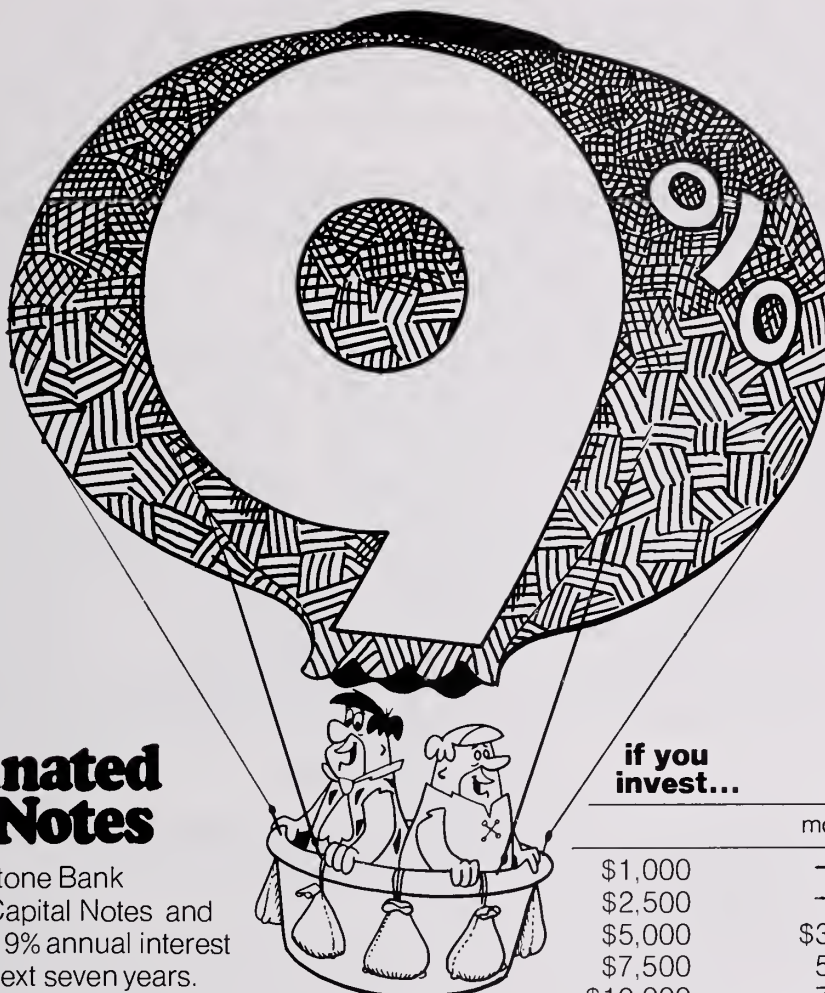
Roger Williams General Hospital

825 Chalkstone Avenue

Providence, R. I.

All interested Physicians, residents, and medical students are cordially
invited to attend.

Old Stone Bank



Subordinated Capital Notes

You can buy Old Stone Bank 9% Subordinated Capital Notes and earn a *guaranteed* 9% annual interest each year for the next seven years. Only \$15 million of these notes will be offered, on a first come first-served basis.

Old Stone Bank 9% Subordinated Capital Notes can be purchased with a minimum investment of \$1,000. If you invest between \$1,000 and \$4,900, interest will be mailed to you or deposited in your Old Stone checking account quarterly.

Monthly Income Feature

Investments of \$5,000 or more have a monthly interest option. The monthly interest check can be a welcome addition to your other monthly income for the next seven years, and it is guaranteed to maturity.

if you invest...

your interest income will be...

	monthly	quarterly
\$1,000	—	\$ 22.50
\$2,500	—	56.25
\$5,000	\$37.50	112.50
\$7,500	56.25	168.75
\$10,000	75.00	225.00

Old Stone Bank Subordinated Capital Notes can be purchased at any of Old Stone's offices. Pick up an offering circular today, or call Investor Relations Department at 274-7800 to have one sent — it is guaranteed to pay 9% interest annually for the next seven years!

Return this coupon to

OLD STONE BANK

Box 1536 Dept B, Providence, RI 02901

Please send me an offering circular for the Old Stone Bank 9% Subordinated Capital Notes.

Name _____

Address _____

City _____ State _____ Zip _____

This advertisement is not an offer to sell or a solicitation of an offer to buy any of these subordinated capital notes. This offering is made only by the offering circular.

Old Stone Bank Subordinated Capital Notes are not deposits of Old Stone Bank and therefore are not insured by the F.D.I.C. They cannot be redeemed before maturity; however, ownership of the notes is transferrable.)

**One contains aspirin.
One doesn't.**



Darvocet-N® 100

100 mg. propoxyphene napsylate
and 650 mg. acetaminophen



**Darvon®
Compound-65**

65 mg. propoxyphene hydrochloride,
227 mg. aspirin, 162 mg. phenacetin,
and 32.4 mg. caffeine



Additional information available to the profession on request.
Eli Lilly and Company, Inc., Indianapolis, Indiana 46206

A Unified Concept Of The Epidemiology And Endocrinology Of Breast Cancer

Virus Is Transmitted Genetically, But Encounters Milieu Affected By Hormonal, Environmental, And Immune Factors

By Leonard J. Triedman, M.D., and Michael J. Weaver, M.D.

The importance of the epidemiologic approach to breast cancer is threefold. Firstly, identification of high risk groups allows wide screen testing and examination techniques with high yield and lower cost. Secondly, epidemiologic studies stimulate other etiologic studies; that is, of hormonal, environmental, genetic, and viral factors. Finally, these studies will hopefully complement all other approaches in the eventual "solution" to the breast cancer problem. In the end, our goal must be to diversify our therapy to meet specifics, should indeed breast cancer be a collection basket term with several different etiologies, or eventually to unify our concepts so that one disease process becomes identifiable, hypothesizing further one treatment and, better yet, one prophylaxis.

This paper is intended to review the more significant findings of epidemiologists on breast cancer and to observe their reflection in the most recent endocrinologic, genetic, and viral studies which are providing more and more information biochemically and microscopically, which closely parallels previous epidemiologic studies.

A general overview of the subject repeatedly

LEONARD J. TRIEDMAN, M.D., F.A.C.S., F.I.C.S., *Surgeon, Miriam Hospital and Roger Williams General Hospital; Instructor in Surgery, Brown University Program in Medicine.*

MICHAEL J. WEAVER, M.D., *Chief Surgical Resident, New England Medical Center, Boston, Massachusetts.*

confirms several factors which consistently are in evidence throughout the recent literature. These are the recognized incidence facts:

1. The risk is two times greater for women who have their menopause beyond age 55 than for those who have it at age 45 or earlier.⁴⁹

2. Women castrated before age 35 have one-third the risk of the general population.⁴⁹

3. Unmarried women and those with fewer children have a greater risk of developing breast cancer.³⁸

4. Japanese women have one-fifth the incidence of breast cancer of American women. Japanese-American women have an increase in incidence approaching the incidence in American women as more generations of their families make their home in America even though they do not outmarry.¹⁶

5. Affluent and Jewish women have a two times greater risk of developing breast cancer than the general population.⁴²

6. Women with a family history of breast cancer are more likely to develop breast cancer.^{17, 21}

7. Breast feeding has no proven protection against breast cancer.¹²

8. Women with cancer in one breast have a 10 per cent chance of developing tumor in the other breast; a two and one half times greater risk than the general population.⁷

9. The risk is much higher in larger women, especially those on a high fat diet.⁴⁵

(Continued on next page)

ESTROGEN

Since 1896 when Beatson⁵ discovered the beneficial effects of oophorectomy in disseminated breast cancer, ovarian hormones⁶ have been implicated as having a significant role in the development and pathogenesis of breast tumors. Estrogens have been implicated as carcinogens in the offspring of women treated during pregnancy with diethylstilbesterol, in male breast cancer, and in some carcinomas of the cervix and uterus.³⁸ Estrogens have had long term notoriety as mammary carcinogens, but, conversely, estrogens are therapeutic in many post-menopausal women with disseminated disease. Indeed, even pre-menopausal women have been successfully treated with high doses of estrogen while low doses in the same women stimulate tumor growth.⁴⁷

Recently a more specific theme explaining the role of estrogens in breast cancer has evolved. There are three major estrogen fractions: estrone (E1), estradiol (E2), and estriol (E3). Two of the fractions have been shown to be carcinogenic, E1 and E2, while E3 not only is non-carcinogenic, but also competes with E2 for cytoplasmic binding sites in mammary tissue. Thus, the higher the $E3/E2 + E1$ ratio is in a given woman, the lower is her chance of developing breast cancer.¹³

This hypothesis has been tested by epidemiologic studies,^{16, 30} and the results of these studies are highly consistent with the proposal. As predicted, North American women with a five to six fold increased risk over Asian women for developing breast cancer have significantly lower $E3/E1$ and $E2$ ratios compared with aged matched Asian women. This theory also fits nicely if viewed in the light of normal endocrine physiology. Early castration and shorter menstrual histories are protective, because in the follicular phase of the menstrual cycle most of the estrogen is synthesized in the form of estradiol. Estriol on the other hand is produced during the luteal phase of the cycle and during pregnancy estriol is increased in much greater amounts than the other two fractions.¹¹ This may explain the protective influence of pregnancy and also possibly indirectly explains the greater risk in more affluent patients (later marriage and fewer children).

ESTROGEN RECEPTOR THEORY AND ESTROGEN RECEPTORS

In 1965 Jenson²⁴ and others demonstrated estradiol receptors in human mammary tumors. These receptors have also been found in normal

uterus, vagina, pituitary, and hypothalamus. Receptors were found in about one-half of pre-menopausal patients, and in a somewhat smaller percentage of post-menopausal patients. This is in agreement with the clinical experience that breast cancer is hormone dependent in 40 to 50 per cent of cases.^{27, 28}

Essentially, estrogen receptors are 8S particles in cell cytoplasm which bind with estrogen to become a complex 5S unit. This complex is transferred to the nucleus where binding of the complex to a gene site is believed to result in protein synthesis reflecting estrogen stimulation.²⁶ The importance of this phenomenon is that estrogen receptor testing has proved a highly accurate method of determining subsequent response to endocrine ablation. In a recent study combining results of several centers in this testing, of 57 estrogen receptor positive patients, 46 had objective remission, while only four out of 79 estrogen receptor negative patients benefited from endocrine ablation.²⁶

These are indeed encouraging results especially when the cases are reviewed individually, as some of the failures with estrogen receptor positive tumors occur in patients with liver metastasis. If one also considers that many of these patients have multiple metastases and that analyses of multiple metastases have given mosaic patterns (some positive and some negative) to estrogen receptor testing, it becomes obvious that further refinements may give close to 100 per cent accuracy in predicting response to endocrine therapy or endocrine ablation. Some centers have already begun keeping records of estrogen receptor testing on breast lesions at the time of mastectomy, and only further studies will determine their accuracy in predicting response to ablation.²³

PROGESTERONE

Progesterone stimulates mammary gland growth, inhibits pituitary gonadotropins, and possesses antiestrogenic and antiandrogenic properties. Both stimulation and retardation of rat mammary tumors has been reported.

Progesterone has been used with some success in hormone responsive breast tumors,⁴⁷ although it is generally suggested that their value is less than (and that their use should follow) estrogens and androgens.¹⁸ Progesterone has been successfully combined with estrogen to bring about remissions in a higher percentage of recurrent and

metastatic breast cancer than with estrogen use alone.¹⁴

Although greatly feared because of their estrogen components, contraceptive pills have never been shown to cause an increased incidence of breast cancer despite extensive observation.^{3, 52, 54} All of these authors have alluded to the possible protective influence of the progesterone content. All also hasten to add that not enough time has elapsed since the widespread use of the birth control pills for us to become complacent about their possible carcinogenic potential.

Sherman and co-workers,⁴³ while studying infertility, have recently proposed from their data another hormonal abnormality associated with increased breast cancer. While studying follicle stimulating hormone (FSH), luteinizing hormone (LH), progesterone, and estrogen levels in infertile and normal women during their menstrual cycles, they have proposed an entity which they call the "short luteal phase." By their definition, this is a luteal (progesterone secreting) phase of less than 10 days, observed in women with both regular and irregular menstrual periods. Endometrial biopsies have confirmed concurrent lack of secretory endometrium in these women. This information can be coupled with a previous report²⁰ in which 87 women with breast cancer were compared with 50 women without breast cancer as control. While endometrial biopsies were normal in 68 per cent of controls, they were normal in only 17 per cent of breast cancer patients. This provides at least circumstantial evidence that the short luteal phase may indeed be the physiologic and morphologic expression of the hormonal defect present in association with breast cancer.

Progesterone binders have recently been identified in human and mammary cancers, although their significance has yet to be determined.⁴⁸

PROLACTIN

The importance of human prolactin has recently been studied amid the hormonal milieu necessary for the development of breast cancer. Prolactin has been shown to be a stimulant to hyperplastic alveolar nodules (pre-malignant lesions) in the C3H mice (mice in which tumors occur spontaneously).⁴⁵ Increasing serum prolactin with pituitary isografts increases the frequency of mammary tumors in adreno-ovariectomized animals and lowering serum prolactin with ergot drugs lowers the frequency of mammary tumors.⁴⁵ Conversely, comparing prolactin levels in C3H mice (high prevalence of mammary tumors) with prolactin levels

in C57BL mice (low prevalence for mammary tumors) Sinha found the C3H rats to have consistently lower levels until very late in life.⁴⁴

In Sprague Dawley rats (rats highly susceptible to the development of breast tumors under the stimulus of the carcinogen dimethylbenzanthracene) prolactin is necessary for the development of the tumors, but in super physiologic amounts appears to be protective against tumor development. Once the tumors have been induced in rats, however, increasing prolactin levels by pituitary grafts, reserpine, phenothiazines, or median eminence lesions enhance tumor growth while the use of ergot drugs decreases tumor⁴⁵ growth.

In human subjects studies have been ambiguous. Kwa et al.²⁵ found no difference in plasma prolactin levels comparing 115 women with breast cancer to 115 controls, but did find higher prolactin levels in 64 members of nine families with a high prevalence of breast cancer. Turkington⁵⁰ found increased prolactin in five of eight patients who had remission of their metastatic disease following pituitary stalk section. Perhaps the most important work to date on prolactin has been that of Minton who has achieved excellent results in the relief of metastatic bone pain in 10 of 30 patients using 250 to 500 milligrams of L-DOPA (a prolactin inhibitor) every four hours.³² These results correlate closely with results of endocrine ablation in the same patients. Although the study is as yet small, it appears that L-DOPA testing may be used in conjunction with estrogen receptors to predict with a high degree of accuracy patients who will respond to endocrine ablation.³³

How does the estrogen theory stand now following the most recent work with prolactin? Estrogen itself has a direct effect on normal and cancerous mammary tissue, as does prolactin. Estrogen stimulates the release of prolactin (Sound theory in rats, still ambiguous in human subjects⁴⁵). However, since estrogen cannot support tumor growth in the absence of a pituitary, whereas prolactin supports tumor growth in the absence of ovaries and adrenals, estrogen may play only a secondary role to prolactin. It has been noted also, however, that prolactin acceleration of tumors in the absence of estrogen is a short-lived phenomenon and that these tumors regress in 10 to 12 days.³¹ In summary, estrogens are probably essential but not sufficient for the growth of some mammary tumors. Exactly how prolactin

(Continued on next page)

studies will relate to our previously estrogen-oriented epidemiologic studies remains yet to be studied extensively.

Prolactin research has given strength to one theory favoring the influence of environmental factors on breast cancer development. It has been shown that women with high fat diets have an increased incidence of mammary carcinoma.³⁸ In rats a high fat diet increases serum prolactin and stimulates the induction of breast tumors, an effect which is abolished by the use of anti-prolactin drugs.⁴⁵

Recently prolactin receptors have been demonstrated in mammary cancer cells and have been shown to be associated with hormone dependence.⁵¹ Whether the same receptors will be found in human breast tissue and demonstrated to have significant prognostic value remains to be seen.

OTHER HORMONES

It is not our purpose to discuss in detail the roles of testosterone and cortisone in relation to the hormonal milieu of breast cancer patients. Certainly all have been used successfully to treat hormone dependent metastatic breast cancer both separately and in series with estrogen therapy and ablative procedures.⁴⁷ Whether their efforts are primary or are a result of their alteration of the estrogen-prolactin axis remains to be seen.

The role of thyroid hormone in breast cancer has been discussed sporadically in the past, but recent exciting work is now underway in studies of Mittra and co-workers^{34, 35}, who have shown significant alteration of prolactin metabolism by thyroid stimulating hormone. Mittra has not only revived several forgotten epidemiologic studies relating the high incidence of breast cancer in areas of endemic goiter (Michigan) and contrasted them with the low incidence of breast cancer in areas of high iodine consumption (Japan), but also intends to make biochemical correlations.

Growth hormone is similar to prolactin in many activities, and recent studies have shown this hormone to be elevated in certain strains of mice with a high incidence of mammary tumors.⁴⁴ Growth hormone dependence among human breast cancer patients has been reported.¹⁵ More work is certainly forthcoming in this area.

GENETIC FACTORS

Striking racial variation in the incidence of breast cancer is one strong argument for the importance of genetic factors in breast cancer causation. As previously mentioned,¹⁶ oriental women

have a five times lesser incidence of the disease than Occidental women, and a matching pre-existing protective hormonal milieu has been shown to be present in these women which may be genetically determined. However, this hypothesis is weakened by the fact that breast cancer incidence increases in orientals who have migrated to the west, and this holds despite the absence of intermarriage. Petrakis⁵⁵ has noted that the breast cancer rate in the African Negro is low, but in black Americans the incidence now approaches that in Caucasian Americans. He has related this increase in incidence to racial admixture and has pointed out a strong relationship to the presence of the Duffy gene in black breast cancer patients. This gene, not present in pure black Africans, is frequent in Caucasians and occurs in three to 26 per cent of black Americans. Petrakis⁵⁵ has also reported an association between wet type cerumen-producing individuals and a higher incidence of breast cancer. Cerumen-determining genes exist in two phenotypes, the wet allele being dominant over the dry. The wet type predominates in American and European Caucasians, but is rare in Orientals. A study is currently underway regarding this factor and its relation to the global distribution of breast cancer.

Breast cancer has been reported in a few families where it has been inherited by the females as a simple Mendelian dominant trait.²¹ Fortunately this trait is rare, and in most familial instances the rules of Mendelian inheritance have not been demonstrated to be operative.

Anderson,¹ in a study directed to families in which two or more members had breast cancer, developed from his statistics the hypothesis that two types of breast cancer exist. In one group, the group in which multiple familial cases appeared, he also noted a significantly lower age at diagnosis, a higher incidence of bilaterality, more frequent benign breast disease and ovarian cysts, and a higher incidence of blood group O. In the non-familial group there was an associated older age at diagnosis, less bilaterality, and more frequent occurrence of diabetes, hypertension, uterine disease, and blood type A. These observations have not yet been demonstrated to have any endocrine or viral correlation, but parallel studies along such lines may prove valuable in confirming the hypothesis.

Much other diverse evidence for the role of genetic factors in breast disease can be cited.

(Continued on page 353)

Surgical Treatment Of Angina Pectoris

Patients With Unacceptable Morbidity Despite Optimal Management Should Be Evaluated For Revascularization Surgery

By Karl E. Karlson, M.D., Ph.D.

Patients with symptomatic coronary heart disease are candidates for surgical therapy when appropriate drug therapy does not restore them to a life style acceptable to the patient or if critical life-threatening coronary lesions are demonstrated angiographically. The operation which has been found to be effective and has had increasing application in the last seven years is aortocoronary by-pass. Interposition of vein grafts between the ascending aorta and the obstructed coronary arteries increases myocardial blood flow immediately (Fig. 1). Patients are selected for operation on the basis of appropriate cardiologic examinations, which include electrocardiograms, exercise testing, and cardiac catheterization with coronary cineangiography.

SELECTION OF PATIENTS FOR EVALUATION

Chronic angina: A patient with chronic angina who has sufficient angina to alter his or her life style to the point where limitation of activity is incompatible with what the patient considers to be a productive and enjoyable life should be evaluated for operation. Some patients will tolerate angina which demands a very sedentary existence, forcing them to stop working and participating in many

KARL E. KARLSON, M.D., Ph.D., *Professor of Medical Science, Brown University, Surgeon-in-Charge, Division of Cardiovascular and Thoracic Surgery; Rhode Island Hospital, Providence Rhode Island*

This is one of a series of papers supported by the Continuing Education Program of the Rhode Island Health Science Education Council.

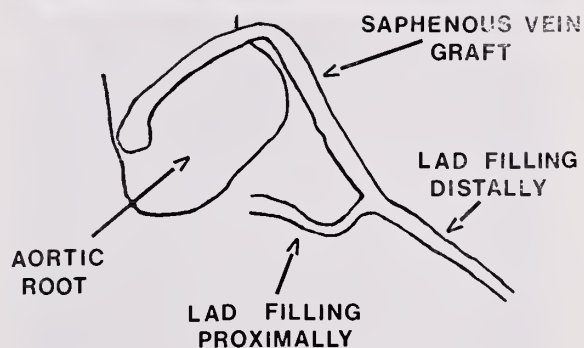


Figure 1. a. Angiogram performed after reversed saphenous vein by-pass graft to the left anterior descending coronary artery. b. The outline drawing of the angiogram shows that contrast medium injected into the ostium of the saphenous vein at the aorta fills the vein graft and the LAD both proximally and distally to the site of anastomosis of the graft to the LAD.

(Continued on next page)

of the usual activities of an active life. If this existence is satisfactory to the patient, operation to relieve the angina is not necessary. However, if angina causes limitations which result in economic hardship or less than acceptable measure of life's pleasures, such a patient should be evaluated for revascularization. Therefore, the amount of angina which is an indication for revascularization varies from patient to patient.

Unstable angina: Patients in this group have angina on effort of recent origin, angina on effort with a changing pattern, or angina at rest. These patients have electrocardiographic changes of myocardial ischemia but without Q waves or enzyme changes of infarction. They are candidates for urgent coronary angiography and revascularization surgery because they have an increased risk of myocardial infarction. This symptom complex is frequently termed intermediate coronary syndrome: that is, of intermediate risk between stable angina and frank myocardial infarction. Prompt evaluation and myocardial revascularization surgery will restore the great majority of these patients to full activity without angina.

Left main coronary stenosis: Patients who have demonstration of left main coronary stenosis, even though they may be asymptomatic or virtually so, are candidates for consideration of myocardial revascularization. This is particularly so if they have greater than 2 mm depression of the ST segment on exercise testing. This group of patients has a reported risk of death in one year of up to 45 per cent, a risk sufficient to warrant revascularization in appropriate cases. Although there may be some



Figure 2. Angiogram after injection of contrast into the left coronary artery. A 95 per cent stenosis of the proximal left anterior descending coronary artery is indicated by the arrow. The distal LAD is of adequate caliber for bypass.

dispute concerning severe obstructions of the proximal left anterior descending coronary artery, our opinion is that this is also a dangerous lesion for which bypass should be considered in the asymptomatic patient.

INDICATIONS FOR OPERATION

Patients with angina pectoris in whom it is impossible to achieve an acceptable life style on medical management are candidates for operation if the anatomy of the coronary arteries is appropriate as demonstrated by cineangiography and the left ventricular function is adequate.

Coronary anatomy: Coronary arteries are suited for bypass grafting if they have hemodynamically obstructive significant proximal stenoses and have adequate lumen distal to the obstruction (Fig. 2). The distal lumen should be at least 1.5 mm in diameter to allow an anastomosis between the vein and the coronary artery of sufficient size to remain patent. Distal arborization of the vessel should be visualized to anticipate good "run-off" and significantly improved blood flow to the myocardium. Seventy per cent or greater obstruction of the right coronary artery, the left anterior descending coronary artery, the circumflex coronary artery, or its major marginal branches is considered significant. A proximal obstruction of this extent in any one of these vessels associated with incapacitating or uncontrollable angina is an indication for bypass.

Left ventricular function: The risk of operative mortality in bypass operations is almost entirely associated with the adequacy of function of the left ventricle. This is best evaluated by cardiac catheterization, at which time the left ventricular end diastolic pressure is measured and the ejection fraction of the left ventricle either estimated or, more recently in our laboratory, measured from the left ventriculogram. A poorly functioning left ventricle indicates an increased operative risk. An ejection fraction of less than 40 per cent, an end diastolic pressure greater than 20 mm Hg, or both are indications of impaired function. However, some patients with a poorly functioning ventricle are significantly relieved of symptoms and some may even experience improvement in ventricular function after revascularization. They therefore should be considered for operation if the coronary arterial anatomy is favorable and there are no other contraindications to operation.

RESULTS OF OPERATION

Operative mortality: The operative mortality for
(Continued on page 356)

Using Psychiatric Consultation Liaison Service

Physicians Should Become Aware Of The Importance And Potentialities Of Consultation Liaison Psychiatry In Hospital Practice

By John R. Ruggiano, M.D.

4

The purpose of this paper is to familiarize the attending physician or house officer of a general hospital with the concept of psychiatric consultation liaison service. It is hoped that with a better understanding of the range of application and the limitations of this service the physician of any specialty can make better use of the psychiatric consultation in his delivery of total patient care. The aspects of who, how, and what in the initiation of a consultation should be known by the physician: Who should initiate the consultation, the mechanics of how it is initiated, and what questions or problems realistically are in the realm of psychiatric expertise. The author draws from an 18-month experience of consultation liaison psychiatry that includes over 400 consultations at Rhode Island Hospital between August of 1973 and January of 1975.

WHO SHOULD INITIATE THE CONSULTATION?

A general hospital consultation is a question that one expert, the consultor, asks of another, the consultant. A psychiatric consultation is a question asked of a psychiatrist by a consultor from any of a variety of sources. The consultation may be initiated by a physician of any hospital

service, the nursing staff, social service, the hospital administration, the patient himself, the patient's family, or even another psychiatrist. Any of the sources, experts in their own field, may have a question or problem requiring the expertise of a psychiatrist and thereby may initiate the psychiatric consult. Although the source is varied, it is most commonly the physician who initiates the consultation, and among physicians it is most often those of the medical service who request the consultation. A study by Kaufman¹ showed that, out of 13,811 admissions in a two-year period 1,319, 10 per cent resulted in psychiatric consultation, and of these 617, 50 per cent of the consultations, were from the medical service. A study by Vaillant² et al. showed that psychiatric consultation was sought in one out of six admissions. Percentages of emergency room patients that require psychiatric help tend to run even higher. Nigro³ found that 28 per cent of emergency room visits required psychological management. Bellak⁴ et al. reported that 50 per cent of the patients in a medical-surgical emergency clinic had psychological problems unrelated to a somatic complaint. At Rhode Island Hospital the percentage of admissions resulting in psychiatric consultation, one per cent, is much smaller than any of those quoted, but the distribution of sources for the consultations roughly corresponds to that of Kaufman's study. These figures do not attempt

(Continued on next page)

JOHN R. RUGGIANO, M.D., *a Providence Psychiatrist and Staff Physician, Rhode Island Hospital.*

to prove anything in particular, but do indicate who is using the consultation service and at what rate. They should demonstrate for example that the internist who has hospitalized 75 to 100 patients without a psychiatric consultation may be overlooking significant emotional components of this patients' illness.

HOW TO INITIATE THE CONSULTATION

Initiating the consultation involves three considerations: informing the patient, specifying the question, and communicating the specific question to the consultant. Informing the patient may be simple and routine if the patient recognizes his psychiatric problem and readily consents. It may require more tact if the idea of the psychiatric problem is new to the patient. Openers such as "Your emotional reaction to this illness may be complicating things; I should like to get a psychiatric opinion" can be helpful in leading to discussion with eventual patient consent for the consultation. To ask for consultation on an uninformed or unconsenting patient should be avoided because of its likelihood of disastrous consequences of embarrassment or even legal complications. For the more complex situation problems of informing the patient or obtaining consent can easily become part of the consultation and, as such, best solved by discussion with the consultant.

When the patient has been informed, the next consideration is specifying the problem. Specifying the problem by means of a clear statement or specific question allows the consultant to focus his attention and concentrate his efforts. The more specific the question of the consultation the more likely the consultant can provide useful information. Theoretically any patient can provide enough material and psychodynamics to complete a multi-volumed case study. A request to "evaluate patient X" with no specific question could result in psychological testing, social service case study, and weeks of psychiatric observation and interview, yet yield no useful information for the medical consultor. On the other hand a specific request such as "Evaluate this patient's suicidal potential" allows for much greater efficiency in the use of the consultant's time.

Communicating the specific question to the consultant is the next step in the initiation of the consultation. The ideal method is by verbal communication between physicians. Where this ideal is not practical, there are acceptable compromises. Many hospitals use a consultation form with carbon copies in triplicate on which the consultor

states his problem or question and sends it to the consultation service. The consultant then writes his opinions and recommendations on the form, and it becomes part of the patient's medical record. Where this system is not available, another acceptable compromise is a written statement of the reason for the consultation in the progress notes of the chart with a corresponding order in the doctors' orders. Some other compromises in communication are not acceptable. Examples are: An order for the consultation in the doctors' orders with no other clue to the problem mentioned in the chart; or worse still, a telephoned message from a ward clerk to the consultant that says "Dr. X wants you to see Mrs. Y on ward 8."

An anecdotal account of such a compromise will show its potential for wasted effort. The author was asked to see a patient on the medical service. The call had come from a ward clerk who could not remember the name of the physician who asked for the consultation. The consultant found a 45-year-old jaundiced female with "history of alcoholism" and no other clue to the reason for psychiatric consultation in the chart. The consultant directed his attention to the alcohol problem. Some comments on withdrawal phenomena were made, and an offer of follow-up should referral or placement be needed. It was later learned that social service had suggested the consultation to the resident for a question of competency of motherhood. Needless to say, much time and effort had been wasted on this unacceptable compromise of adequate communication of the problem.

WHAT MAY BE ASKED

Problems within the range of application of the psychiatric consultation fall in three categories: diagnosis, treatment, and disposition.

Questions in the first category are usually concerned with the possibility of an emotional or psychopathologic basis for the somatic symptom that led to hospitalization. "Is this weight loss due to depression?" or "How much of this chest pain is anxiety?" are typical questions in this category. A differential diagnosis of hypochondriasis, hysteria, and malingering is frequently considered when that pesky discrepancy arises as between subjective complaint and objective findings. The psychiatric consultant may be helpful in discerning diagnostic patterns and positive mental status findings that can be much more supportive than negative laboratory tests when sus-

(Continued on page 358)

The Development And Future Prospects Of Family Practice Training In Rhode Island

Program At Pawtucket Memorial Hospital Will Enhance The Quality Of Care In Rhode Island

By Robert P. McCombs, M.D.

In the mid 1960s because of an awareness of the need to review patterns of graduate medical training the Trustees of the American Medical Association appointed a Citizens' Commission on Graduate Medical Education under the chairmanship of John S. Millis, Ph.D. The report of the commission, titled *The Graduate Education of Physicians*, is having and will continue for many years to have a profound effect upon both graduate and undergraduate medical education. It was here that the concept of training physicians for comprehensive health care was first clearly stated. These physicians would be involved in primary and continuing health care based upon family units, they would be family physicians whose training and status would be comparable to that of other specialists and, although strongly based on Internal Medicine and Pediatrics, would have a strong orientation in Psychiatry and the Social Sciences, and in addition would provide experience in emergency care, problems relating to pregnancy, delivery, and neonatology as well as surgical diagnosis, postoperative management, and follow-up care. Emphasis would be placed upon community health, comprehensive health care, and counselling through the development of a Model Family Practice Center where ambulatory patients could be seen under conditions favorable to patient and physician.

ROBERT P. MCCOMBS, M.D., *Director, Medical Education, Memorial Hospital, Pawtucket.*

BACKGROUND

While the Citizens' Commission on Graduate Medical Education was making its survey, the Council on Medical Education of the American Medical Association appointed an ad hoc Committee on Education for Family Practice, chaired by William R. Willard, M.D. Liaison was established with the Millis committee, and the report of the Willard committee, titled *Meeting the Challenge of Family Practice*, is consistent with and reinforcing of that of the Millis commission. It spelled out details of education and board certification in Family Practice and was approved by the House of Delegates of the AMA in November 1966. The stated principles have been embodied in the Guide for Residency Programs in Family Practice prepared by the Residency Review Committee for Family Practice and approved by the American Academy of Family Practice, the American Board of Family Practice and the Council on Medical Education of the American Medical Association. The first residency programs in Family Practice were approved in 1967, and the first group of trainees completed training in 1970. In 1975 there were 233 approved operating programs. Only a few of these are in New England; the one at Memorial Hospital of Pawtucket, RI is the first in Rhode Island. All approved programs are based upon the principles first outlined by the Millis commission, but each has individual characteristics that are determined by the community in which

(Continued on next page)

the hospital is located, other training programs in the hospital, relationships with medical schools, and other factors.

RESIDENCY AT MEMORIAL HOSPITAL

The Family Practice Residency training program at Memorial Hospital will be unique in many respects. 1) It is a Brown University program with full support of the administration and key faculty members of Brown University School of Medicine who are most interested in its development and eventual success; few programs are so closely related to medical schools. Limited parts of the regular training and many of the electives offered to residents based at Memorial Hospital will involve teaching at other hospitals affiliated with Brown. Yet the overall supervision of the program will be under the direction of the head of the Division of Family Practice, who will be based at Memorial Hospital. 2) When fully implemented in three years the Family Practice Residency will be the only full residency training program at Memorial Hospital, inasmuch as the present residency in Internal Medicine will gradually be phased out over this period. Thus, there will be no competition between services for teaching material as occurs in large teaching hospitals with multiple training programs. 3) The Director of the Family Practice program not only will supervise the training at Memorial Hospital, but will oversee the teaching of Family Medicine at Brown and will study and make recommendations regarding the extensions of Family Practice training in other hospitals in Rhode Island. The Director will appoint associates to aid in the development of the model Family Care Center at Memorial Hospital. 4) New appointments will soon be made for full-time teaching associates at Memorial Hospital in Psychiatry, Pediatrics, and Obstetrics. These will be approved jointly by the Director of Family Practice, the respective service chiefs at Memorial Hospital and section leaders of these disciplines at Brown. In this manner the Director of Family Practice will be able to coordinate teaching and patient care on services not under his immediate direction. The Medical Service will add two new divisions so that there will be five, each headed by a full-time chief. 5) The Chief of the Family Practice Service will supervise activities of the emergency room.

PROGRAM

During their three years of training in Family Practice residents will spend approximately 14 months on the medical wards with graded respon-

sibilities. They will also attend medical specialty out-patient clinics approximately three hours each week. They will spend eight months in the Section in Human Growth and Development divided as follows: Inservice Pediatrics, two months; ambulatory Pediatrics, two months; neonatal intensive care, one month; Obstetrics-Newborn Service, two months; Gynecology-Oncology, one month. There will be two months in the emergency room, two months in general surgery, and two months combined in-patient and out-patient psychiatric training in which interview techniques, psycho-pharmacology, collaboration with mental health professionals, utilization of social support systems, diagnostic and evaluation skills, out-patient treatment, and follow-up care will be emphasized. In the third year it will be possible to participate in several among many elective programs offered so that a resident may round out his training as he or she wishes.

During all three years and for increasing periods each year residents will spend time in the model Family Care Center at Memorial Hospital. This is a facility especially designed and staffed to give opportunities for residents under supervision and under ideal conditions to care for ambulatory patients assigned to him by families. The Family Care Center is completely separate from other out-patient services. Patients are seen by appointment, and consultants in every specialty are available to see patients with the resident. The center provides a clinical base where residents will observe and learn how to handle a variety of problems involving community and preventive medicine. They will participate in programs for genetic and marriage counselling, family planning, alcoholism, drug abuse, and mental health. Residents will learn how to participate as leaders in a team approach to medical care, making use of nurse practitioners, social workers, psychologists, public health professionals, and other health assistants. They will learn how to identify and utilize health resources in the community to aid in management of difficult problems in family health care. The extended care unit of the hospital and home care service are numbered among these resources.

MISCONCEPTIONS

Since there apt to be misconceptions about any new program until everyone is familiar with its operation, some of these will be discussed. Some physicians have expressed fears that development of this type of program represents an attempt by

(Continued on page 360)

Editorials

LIAISON PSYCHIATRY

Published elsewhere in this issue of the JOURNAL is a paper describing the nature and benefits of a consultation liaison psychiatric service. The author has pointed out in a separate communication to the editors that prior to 1974 Rhode Island had no psychiatric consultation liaison service in a general hospital. Only one per cent of admissions to Rhode Island Hospital presently result in psychiatric consultation, compared to ten per cent in the Mount Sinai Hospital of New York, as reported in a study by Ralph Kaufman. The author of the paper published in this issue believes that this discrepancy may signify not only lack of awareness on the part of the physicians of Rhode Island, but also a deficit in total patient care.

Another recent report¹ on the subject from the Mount Sinai Hospital focuses on the usefulness of liaison psychiatry in the management of the dying

patient. Comprehensive medical care every step of the way, it states, must involve doctors in the total life experience of the patient, not only in his organic illness. There are, in fact, situations in which the doctors need more help than does the patient in coping with the intense and conflicting feelings engendered by a hopeless situation. As a result of the division of functions in the modern general teaching hospital the anxious patient is often confronted by an impenetrable facade of distance and withdrawal.

In calling attention to the need and potentialities of liaison psychiatry in many trying situations, the author has provided a timely and significant contribution.

REFERENCE

- ¹Roose, LT, and Zuckert, HD: Every Step of the way. Mt. Sinai Journal of Medicine, 42:99, 1975.

SAFETY IN NUMBERS

The recent American literature has contained several retrospective studies of large numbers of cases of pregnancy termination. For the most part these have indicated a high degree of safety, more particularly in the first trimester.

A recent prospective study from St. Paul, Minnesota strongly reinforces this impression. A study period of eight months starting in October 1972 encompassed 10,453 first trimester abortions, for sixty-five per cent of the cases there was full follow-up information.

All procedures were performed by the same group of Board Certified or Board Eligible staff gynecologists following a standard protocol. Fifty per cent of the cases were treated within 6 weeks of gestation, 93 per cent within 10 weeks (12 weeks from the last menstrual period), and only 7 per cent between 10 and 14 weeks (those at the upper limit not usually intended).

Vacuum aspiration under paracervical block was used in every case. Flexible Karman catheters were usually selected in cases under 8 weeks since the last menstrual period. Premedication, oxytocics, and antibiotics were administered only if indicated.

Major complications included all hospitalizations, all suspected perforations, fever lasting for three days or more, and other disorders with comparable degrees of death risk, prolonged illness, or functional

impairment. The most significant immediate complication was uterine perforation. Delayed complications of importance were retained placenta and pelvic infections. There were five continuing pregnancies and four laparotomies. Three patients required blood transfusions. The overall major complication rate was 0.92 per cent, and 1.4 per cent for the 65 per cent of cases with complete follow-up. There were no maternal deaths.

Minor complications were mainly cramps, mild fever, or bleeding, preventing the patient from carrying on her usual activities, but not requiring hospitalization. Since completion of the original study the series has grown to 33,000 vacuum aspirations, still with no maternal mortality.

Several conclusions can be drawn from this massive study. It is desirable that termination of pregnancy, when sought, be accomplished during the first trimester. When carried out under conditions laid down by the authors, vacuum aspiration under paracervical block is an eminently safe and reliable procedure having a low complication rate and (thus far) no mortality.

REFERENCE

- Hodgeson, JE, Portmann, KC: Complications of 10,453 consecutive first-trimester abortions; a prospective study. *Am J Obstet Gynecol*, 120:802, 15 Nov 1974



Editor's Mailbox

RIPSRO INCLUDED

To the Editor:

In an editorial titled "PL 93-641," published in the June, 1975 issue of the RHODE ISLAND MEDICAL JOURNAL, there was an important omission concerning RIPSRO, Inc. On Page 281 of that issue, the editorial reported on the National Health Planning and Resources Development Act of 1974 and indicated those agencies which had representation on a committee which had been convened under the governor's office to recommend how the functions of a health system agency can best be implemented in Rhode Island. The omission to which I refer was that RIPSRO was not included among the listed agencies.

I call this matter to the attention of the members of the Rhode Island Medical Society since, in

a recent RIPSRO newsletter (Vol. II, No. 2, June, 1975), I had mentioned in my President's Column that RIPSRO has urged physician representation on this Committee on Health Legislation. I have suggested not mere tokenism but a substantial number of doctors who would represent not only RIPSRO but also the Medical Society.

In conclusion, I wish to emphasize the significance of the National Health Planning and Resources Development Act of 1974 and I urge physicians to request the governor to name a substantial number of doctors to the policy-making body which will implement the Act in Rhode Island.

ALTON M. PAULL, M.D.
President
RIPSRO, Inc.



CONTINUING MEDICAL EDUCATION SURVEYS

To The Editor:

On February 25, 1975 the Continuing Medical Education Committee of the Rhode Island Medical Society performed its first survey of a Rhode Island hospital for the purpose of accreditation for Continuing Medical Education credit. The Rhode Island Hospital was the hospital surveyed.

The background of the survey is that there is a present need for approved continuing education credit for physicians who wish to qualify for the Physicians' Recognition Award given by the AMA for approved activities in the continuing education field, the American Academy of Family Practice, and others. There is a possibility that in the future state licensing, hospital staff reappointment, and American Board Recertification will require evidence of approved continuing education.

With the full cooperation of the American Medical Association and the assistance of Doctor Rutledge Howard of the Office of Continuing Medical Education of the AMA, the survey was performed and subsequently the full committee approved the

Rhode Island Hospital for granting credit approved by the Society in its Continuing Medical Education program. This program does not affect residency or intern training.

Credit is given based on a hospital's showing evidence that continuing medical education activities are formulated according to demonstrated needs and that methods are used to determine the efficacy of the offerings.

The CME Committee plans to survey Pawtucket Memorial Hospital next and hopes to have at least four of the 13 general hospitals in the state surveyed this year.

Plans are also underway for a simpler form of inspection and certification for any specialty or other professional societies that wish to have their offerings approved for credit.

HOWARD S. BROWNE, M.D.
Chairman,
Committee on Continuing
Medical Education



A UNIFIED CONCEPT OF THE EPIDEMIOLOGY AND ENDOCRINOLOGY OF BREAST CANCER

(Continued from page 344)

^{12, 38, 40, 55} However, a unified or therapeutically relevant concept awaits definition.

VIRAL FACTORS

Out of the genetic theory has grown evidence for the viral theory of transmission. J. A. Murray was the first to demonstrate a statistically higher incidence of mammary cancer in mice who had cancerous ancestry, compared with those of non-cancerous ancestors.¹⁷ By 1933 it was shown that normal Mendelian inheritance patterns did not dominate in the above inheritance but rather that a higher incidence of mammary tumors was on the mother's side. This led to Bittner's discovery⁸ in 1936 of the "milk factor," the tumor inducing activity of the milk of mice with a high incidence of breast tumor. He demonstrated this by the beautifully simple experiment of substituting high-tumor-incidence mice as foster mothers for low-tumor-incidence mice sucklings and vice versa. Mouse mammary tumor particles were first demonstrated by electron microscopy in 1954. Since then biophysical and immunologic studies have confirmed that "milk factor" is indeed viral.

In 1967 particles in human mammary tissue and in human milk were observed to be strikingly similar to mouse mammary tumor virus particles.¹⁷ In a dramatic study by Moore³⁶ and his colleagues, viral type particles were demonstrated in the milk of 60 per cent of American women with positive family histories of breast cancer, in 39 per cent of women from the Parsi community of Bombay (an inbred population with a high incidence of breast cancer), and in only five per cent of American women with no family history of breast disease. Indirect immunofluorescence tests carried out on the sera of breast cancer patients and their relatives demonstrated antigenic activity to mouse mammary tumor viruses in the majority of breast cancer patients and in 13 per cent of their relatives. Sera from normal donors showed much less reactivity.³⁹ In 1970 an enzyme, reverse transcriptase, was described and has since been demonstrated to be a universal property of RNA tumor viruses.⁴⁶ More recent studies have demonstrated particles containing this enzyme in the milk of women with a strong family history of breast cancer.⁴¹ Molecular hybridization methods have been used to demonstrate that human breast

RNA tumor particles have a 75 to 90 per cent correlation in amino acid sequence with the RNA of mouse mammary tumor virions.¹⁷ Recently, formalin-inactivated mouse mammary tumor virus has been used as a vaccine to protect two strains of mice against infection with the virus and its tumorigenesis.³⁷ This has given rise to the hope that, either by cross-sensitization (as cowpox protects against smallpox) or by the use of de-activated human virus particles, a vaccine protective against breast cancer may be feasible in the human subject.

Despite the strong evidence for the viral etiology, it has nevertheless been pointed out by Domochowski¹⁷ that Koch's postulates for the identification of an infectious agent have never been satisfied for a viral agent in breast cancer. Nor indeed does the evidence described in this paper necessarily suggest that these viruses are transmitted wholly by breast feeding, as these same tumor particles have been found to be transmitted via sperm and egg in mice.

CONCLUSIONS

By combining all of the above elements we can formulate a more or less unified concept of breast cancer in etiologic terms. The primary agent is very possibly viral, transmitted not in the usual horizontal pattern (epidemicly, i.e., mouth to mouth, feces to mouth, air borne), but in a vertical pattern (via sperm, egg, milk, transplacentally). Very possible these viruses are unable to produce clinical symptoms in some situations unless a proper hormonal milieu is present. Perhaps all of the viruses will eventually express themselves clinically, but the hormonal milieu determines not only the timing but also the mode of expression. Environmental factors (such as high fat diet and prolactin, low iodine diets and goiter, stress and its effect on the hypothalamic pituitary access), play an important role in terms of their effect of altering the hormonal milieu. Genetic make-up will also determine the hormonal milieu, but perhaps another very important yet, relatively unstudied genetic factor involves immune factors versus the infecting virus.

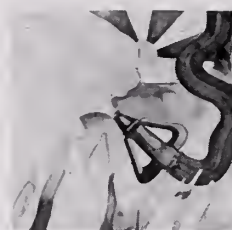
REFERENCES

- ¹Anderson DE: Some characteristics of familial breast cancer. *Cancer* 28:1500-4, Dec 71
- ²Argüelles AE, Poggi UL, Saborida C, et al.: Endocrine profiles and breast cancer. *Lancet* 1:165-8, 27 Jan 73
- ³Arthes FG, Sartwell PE, Lewison EF: The pill, estrogens, and the breast. Epidemiologic aspects. *Cancer* 28:1391-4, Dec 71
- ⁴Atkins HJ: *The Treatment of Breast Cancer*. Lan-
(Continued on next page)

caster, Medical and Technical Publishing Company LTD. 1974, p. 87

- ⁵Beatson GT: On the treatment of inoperable cases of carcinoma of the mamma: Suggestions for a new method of treatment with illustrative cases. *Lancet* 1896, 2:104-7; 162-5, July 11 and 18, 1896
- ⁶Bentvelzen P, Daams JH, Hageman P, et al.: Interactions between viral and genetic factors in the origin of mammary tumors in mice. *J Natl Cancer Inst* 48:1089-94, Apr 72
- ⁷Berg JW, Robbins GF: Bilateral primary breast cancer; a prospective clinicopathological study. *Cancer* 17:1501-27, Dec 64
- ⁸Bittner JJ: Some possible effects of nursing on the mammary gland tumor incidence in mice. *Science* 84: 162, 14 Aug 36
- ⁹Boot LM: Prolactin and mammary gland carcinogenesis. The problem of human prolactin. *Int J Cancer* 5:167-75, 15 Mar 70 (86 ref.)
- ¹⁰Bulbrook RD: Endocrine, genetic and viral factors in the etiology of breast cancer. *Proc R Soc Med* 65: 646-8, Jul 72 (26 ref.)
- ¹¹Bulbrook RD, Hayward JL: Abnormal urinary steroid excretion and subsequent breast cancer. A prospective study in the Island of Guernsey. *Lancet* 1: 519-22, 11 Mar 72
- ¹²Cole P: Hypotheses regarding the etiology of breast cancer. *Proc Natl Cancer Conf* 7:657-61, 1973 (27 ref.)
- ¹³Cole P, MacMahon B: Oestrogen fractions during early reproductive life in the aetiology of breast cancer. *Lancet* 1:604-6, 22 Mar 69
- ¹⁴Crowley LG, MacDonald I: Delalutin and estrogens for the treatment of advanced mammary carcinoma in the post-menopausal woman. *Cancer* 18: 436-46, Apr 65
- ¹⁵DeSouza I, Morgan L, Lewis UL, et al.: Growth-hormone dependence among human breast cancers. *Lancet* 2:182-4, 27 Jul 74
- ¹⁶Dickinson LE, MacMahon B, Cole P, et al.: Estrogen profiles of oriental and caucasian women in Hawaii. *N Engl J Med* 291:1211-13, 5 Dec 74
- ¹⁷Dmochowski L: The viral factor in the genesis of breast cancer: present evidence. *Triangle* 12:37-47, 1973 (68 ref.)
- ¹⁸Editorial: Progestogens and cancer. *Brit Med J* 1: 360-1, 13 Feb 71
- ¹⁹Flax H, Newton KA, Salih H, et al.: Are some women's breast cancers androgen dependent? *Lancet* 1:1204-7, 2 Jun 73
- ²⁰Grattarola R: The premenstrual endometrial pattern of women with breast cancer. A study of progestational activity. *Cancer* 17:1119-22, Sep. 64
- ²¹Haagensen CD: *Diseases of the Breast*. Philadelphia, W.B. Saunders Company, 1971. p. 357 2nd ed.
- ²²Jaffe RB, Yuen BH, Keye WR Jr. et al.: Physiologic and pathologic profiles of circulating human prolactin. *Am J Obstet Gynecol* 117:757-73, 15 Nov 73
- ²³Jensen EV: Some newer endocrine aspects of breast cancer. *N Engl J Med* 291:1252-4, 5 Dec 74
- ²⁴Jensen EV, DeSombre ER, Jungblut PW: Estrogen receptors in hormone receptive tissues and tumors. In Wissler RW, et al.: *Endogenous Factors Influencing Host-Tumor Balance*. Chicago, University of Chicago Press, 1967, Pp. 15-30
- ²⁵Kwa HG, DeJong-Bakker M, Engelsman E, et al.: Plasma-prolactin in human breast cancer. *Lancet* 1: 433-5, 16 Mar 74
- ²⁶Leung BS, Krippaehne WW, Fletcher WS: Prognostic value of estrogen receptor to endocrine ablation

(Continued on page 356)



Pro-Banthine®
brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control.

For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine® (propantheline bromide)

a good
option
in peptic
ulcer

DYAZIDE®

makes sense

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium fre-

quently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy

patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash; urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

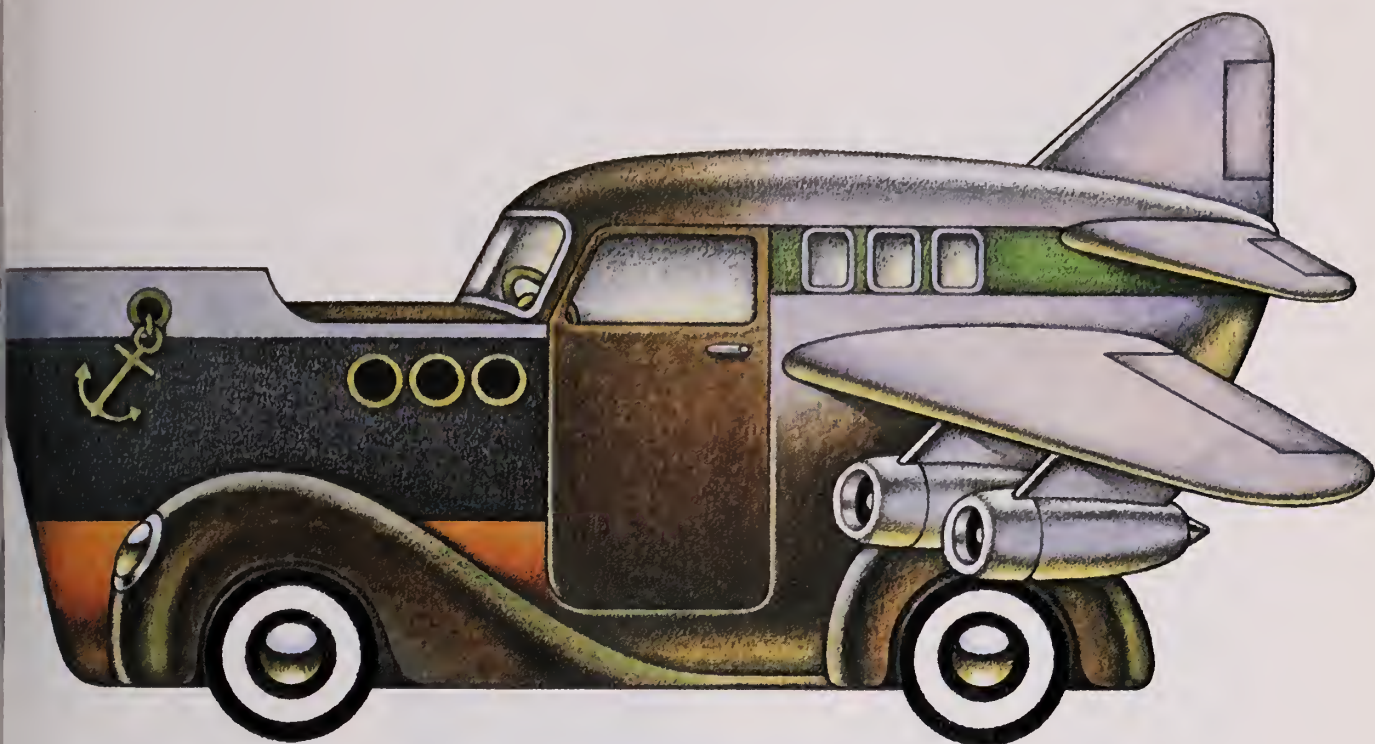
Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630

Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance.
Hydrochlorothiazide to help keep
blood pressure down and triamterene
to help keep potassium levels up.



On land, sea, and in the air...

Up to 24 hours of effective control with single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.

Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION
CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did

not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 
 A division of Pfizer Pharmaceuticals
 New York, New York 10017

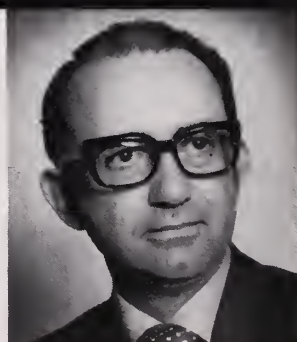
Antivert®/25 Chewable Tablets
 (meclizine HCl) 25 mg.
 for motion sickness

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sitting with glazed eyes listening to a rapid lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. In this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages to a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the most highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a patient insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that frightened by the insert may possibly outweigh the potential good

Opinion
&
Dialogue

purpose of drug information
the patient is to get his coopera-
in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass infor-
mation from physicians, medical
societies, the pharmaceutical indus-
try and centers of medical learning.
The ultimate responsibility for uni-
fied labeling must, however, rest
with the Food and Drug Administra-
tion. There is nothing wrong with
the agency saying, "this informa-
tion is generally agreed upon and
before it should be used," as long
as the process for getting the infor-
mation is sound.

Distribution of the information
is a problem. In great measure it
should depend on the medication in
question. For example, in the case
of an injectable long-acting proges-
terone, we would think it mandatory
to issue two separate leaflets—a
one for the patient to read be-
fore getting the first shot and a long
one to take home in order to make a
decision about continuing therapy.
In this case, the information might
be put directly on the package and
be removable at all. But for a medi-
cation like an antihistamine this
information might be issued sepa-
rately, thus giving the physician the
option of distribution. This could
serve the placebo use, etc.

It is in the distribution of pa-
tient information that the pharma-
cist may get involved. As profession-
als and members of the health-care
team and as a most important source
of drug information to patients,
pharmacists should be responsible
for keeping medical and drug rec-
ords on patients. It is also logical
that they should distribute drug in-
formation to them.

Realistic problems must be considered

We have to expect that the in-
troduction of an information device
will also create new problems. First,
how can we communicate complex
and sophisticated information to
people of widely divergent socio-
economic and ethnic groups? Sec-
ond, what will we say? And third,
how can we counteract the negative
attitude of many physicians toward
any outside influence or input? Hope-
fully the medical profession will re-
spond by anticipating the problems
and helping to solve them. Assum-
ing we can also solve the difficulty
of communicating information to di-
verse groups throughout the United
States, our remaining task will be
the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chem-
ical and such types of material
should not be included. And there is

no point in the routine listing of side
effects like nausea and vomiting
which seem to apply to practically
all drugs, unless it is common with
the drug. However, serious side ef-
fects should be listed, as should in-
formation about a medication that
is potentially risky for other reasons.

Other pertinent information
might consist of drug interactions,
the need for laboratory follow-up,
and special storage requirements.
What we want to include is informa-
tion that will help increase patient
compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the
patient would accomplish a number
of good things: the patient could be
on the lookout for possible serious
side effects; his compliance would
increase through greater under-
standing; the physician would be a
better source of information since
he would be freer to use his time
more effectively; other members of
the health-care team would benefit
through patient understanding and
cooperation; and, finally, the physi-
cian-patient relationship would prob-
ably be enhanced by the greater
understanding on the part of the pa-
tient of what the physician is doing
for him.

the doctor can remove that fear
of 20 or 30 minutes of conversation.
I'm not suggesting that we
hold any information from the pa-
tient because, first of all, it would
be totally dishonest and secondly, it
would defeat the very purpose of the
insert. I do think that a patient on the
control pill should know about the
incidence of phlebothrombosis.
If you're going to tell a patient
the incidence of serious adverse re-
actions, then you have to tell him
a concerned medical decision
has been made to use a particular medi-
cation in his situation after careful
consideration of the incidence of
complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, be-
cause of severe emotional problems,
cannot handle the information
contained in a patient package in-
sert. Yet if we are going to have a
package insert at all, we just can't
have two inserts. I think we might
only have to tell the families of
these patients to remove the insert
from the package.

Legal implications of the patient package insert

Just what effect would a pa-

tient package insert have on mal-
practice? We could try to avoid any
legal implications by pointing out
that the physician has selected a
particular medication because, in
his professional judgment, it is the
treatment of choice. For instance,
you can't tell everyone taking anti-
histamines not to work just because
a few patients develop extreme
drowsiness which can lead to acci-
dents. And what about the very small
incidence of aplastic anemia rarely
associated with chloramphenicol?
If, based on sensitivity studies and
other criteria, we decide to employ
this particular antibiotic, we do so
in full knowledge of this serious po-
tential side effect. It's not a simple
problem.

How do we handle an insert for medi- cation used for a placebo effect?

With rare exceptions, physi-
cians no longer use medications for
a placebo effect. This question does
raise the issue of how a patient may
react to receiving a medication
without a package insert.

Preparation of the package insert

The development of the insert
ought to be a joint operation be-
tween physicians, the pharmaceu-
tical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a co-
ordinator or catalyst. It is the only
organization through which the pro-
fession as a whole, irrespective of
specialty, can speak. It has relatively
instant access to all the medical ex-
pertise in this country. And it can
bring that professional expertise to-
gether to ensure a better package
insert. The A.M.A. can work in con-
junction with the industry that has
produced the product and which is
ultimately going to supply the insert.

I don't think we should rely, or
expect to rely, on legislative com-
mittees and their nonprofessional
staffs to make these decisions when
it is perfectly within the power of
the two groups to resolve the issues
in the very best American tradition—
without the government forcing us
to do it. I think the F.D.A. has to be
involved, but I'd like them to become
involved because they were asked
to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



(Continued from page 354)

- in cancer of the breast, *Surg Gynecol Obstet* 139: 525-8, Oct 74
- ²⁷Maass H, Bruemmer P, Egert D, et al.: On the existence of receptors for estradiol in normal and malignant human tissue and the mode of action of progesterone, *Acta Obstet Gynecol Scand (Suppl)* 19:30-4, 1972
- ²⁸Maass H, Engel B, Hohmeister H, et al.: Estrogen receptors in human breast cancer tissue, *Am J Obstet Gynecol* 113:377-82, 1 Jun 72
- ²⁹MacMahon B, Cole P: The ovarian etiology of human breast cancer. *Recent Results Cancer Res* 39:185-92, 1972 (25 ref.)
- ³⁰MacMahon, Cole P, Brown JB, et al.: Oestrogen profiles of Asian and North American women. *Lancet* 2:900-2, 23 Oct 71
- ³¹McGuire WL, Chamness GC, Costlow ME, et al.: Hormone dependence in breast cancer. *Metabolism* 23:75-100, Jan 74 (154 ref.)
- ³²Minton JP: Proceedings: The response of breast cancer patients with bone pain to L-dopa. *Cancer* 33:358-63, Feb 74
- ³³Minton JP, Balz J: Serum estrogen levels after endocrine ablative surgery in breast cancer patients. Presented at combined meeting of James Ewing Society of Head and Neck Surgeons, 21st Annual Meeting, New Orleans, Mar 27, 1975
- ³⁴Mittra I, Hayward JL: Hypothalamic-pituitary-thyroid axis in breast cancer. *Lancet* 1:885-9, 11 May 74
- ³⁵Mittra I, Hayward JL, McNeilly AS: Hypothalamic-pituitary-prolactin axis in breast cancer. *Lancet* 1: 889-91, 11 May 74
- ³⁶Moore DH, Charney J, Kramarsky B, et al.: Search for a human breast cancer virus, *Nature (Lond)* 229:611-4, 26 Feb 71
- ³⁷Moore DH, Charney J: Breast cancer: Etiology and possible prevention *Am Sci* 63:160-8, Mar-Apr 75
- ³⁸Papaioannou AN: Etiologic factors in cancer of the breast in humans, *Surg Gynecol Obstet* 138:257-87, Feb 74 (387 ref.)
- ³⁹Priori ES, Anderson DE, Williams WC, et al.: Immunological studies on human breast carcinoma and mouse mammary tumors, *J Natl Cancer Inst* 48: 1131-5, Apr 72
- ⁴⁰Rajendran KG, Ghosh SN, Seshadri R, et al.: Some hormonal and genetic aspects of human breast cancer — a review *Indian J Cancer* 10:111-23, Mar 73 (131 ref.)
- ⁴¹Schlom J, Spiegelman S, Moore DH: Detection of highmolecular-weight RNA in particles from human milk. *Science* 175:542-4, 4 Feb 72
- ⁴²Seidman H: Cancer mortality in New York City for country-of-birth, religious and socioeconomic groups, *Environ Res* 4:390-429, Nov 71
- ⁴³Sherman BM, Korenman SG: Inadequate corpus luteum function: a pathophysiological interpretation of human breast cancer epidemiology. *Cancer* 33: 1306-12, May 74
- ⁴⁴Sinha YN, Selby FW, Vanderlaan WP: The natural history of prolactin and GH secretion in mice with high and low incidence of mammary tumors. *Endocrinology* 94:757-64, Mar 74
- ⁴⁵Smithline F, Sherman L, Kolodny HD: Prolactin and breast carcinoma, *N Engl J Med* 292:784-92, 10 Apr 75
- ⁴⁶Spiegelman S, Burny A, Das MR, et al.: Characterization of the products of DNA-directed DNA polymerases in oncogenic RNA viruses, *Nature (Lond)* 227:563-7, 8 Aug 70
- ⁴⁷Stoll BA: Hypothesis: breast cancer regression under oestrogen therapy, *Br Med J* 3: 446-50, 25 Aug 73
- ⁴⁸Terenius L: Estrogen and progestogen binders in human and rat mammary carcinoma, *Eur J Cancer* 9:291-4, Apr 73
- ⁴⁹Trichopoulos D, MacMahon B, Cole P: Menopause and breast cancer risk. *J Natl Cancer Inst* 48:605-13, Mar 72
- ⁵⁰Turkington RW: Molecular biological aspects of prolactin. In *Lactogenic Hormones* Wolstenholme GEW, Knight J: Edinburgh, Churchill Livingstone, 1972 Pp. 111-35
- ⁵¹Turkington RW: Prolactin receptors in mammary carcinoma cells. *Cancer Res* 34:758-63, Apr 74
- ⁵²Vessey MP, Doll R, Sutton PM: Investigation of the possible relationship between oral contraceptives and benign and malignant breast disease. *Cancer* 28:1395-9, Dec 71
- ⁵³Wilson RG, Buchan R, Roberts MM, et al.: Plasma prolactin and breast cancer. *Cancer* 33:1325-7, May 74
- ⁵⁴Vorherr H: Contraception after abortion and post partum. An evaluation of risks and benefits of oral contraceptives with emphasis on the relation of female sex hormones to thromboembolism and genital and breast cancer. *Am J Obstet Gynecol* 117: 1002-25, 1 Dec 73 (118 ref.)
- ⁵⁵Zippin C, Petrakis NL: Identification of high risk groups in breast cancer. *Cancer* 28:1381-7, Dec 71 (31 ref.)

SURGICAL TREATMENT OF ANGINA PECTORIS

(Continued from page 346)

myocardial revascularization with saphenous vein bypass grafts is 4 per cent or less in patients with either chronic or unstable angina. Low mortality is achieved by appropriate pre-operative medical therapy and supportive measures before and during operation. Patients with a good functioning ventricle and coronary arterial obstruction not involving the left main coronary artery or left anterior descending coronary artery proximal to the first septal perforating branch have a very low risk. Patients with multiple vessel disease, including severe obstructions of the left main coronary artery or the proximal left anterior descending artery, are in our experience hemodynamically benefited by pre-operative insertion of an intraaortic balloon assist device to maintain good myocardial perfusion during induction of anesthesia and the early part of the operation before cardiopulmonary bypass is begun and the bypass grafts constructed. Similarly, a patient with a poorly functioning left ventricle is greatly assisted by pre-operative intraaortic balloon assist. Patients having unstable angina have had an intraaortic balloon assistance device inserted before cardiac catheterization in most instances and have had this support continued during and after operation. The operative mortality is affected by the number of coronary arteries involved, with single vessel disease requiring only one bypass having a

mortality of 1 per cent while triple vessel disease requires multiple bypasses having a mortality of 5 or 6 per cent.

Relief of Angina: Studies are now available which indicate that approximately 90 per cent of patients are entirely free of angina post-operatively or have substantially diminished angina with less restriction of activity. Seventy to eighty per cent of patients are totally free of angina, while the remainder of the 90 per cent have symptomatic improvement. The incidence of improvement appears to be similar in chronic angina and unstable angina. Improved quality of life following operation and the return to productive employment has been a worthwhile operative result for these patients. Those few patients who have return of angina after an angina-free interval should be re-studied, with angiographic demonstration of the patency of the grafts and the status of the coronary arteries. If graft occlusion has resulted or if new significant proximal lesions in previously unobstructed coronary arteries are demonstrated, re-operation may be indicated. Re-operation with the establishment of new bypass grafts to adequate distal coronary arteries may again relieve the angina.

Long term survival: The long-term follow-up of the patients who have had bypass operations indicates that the survival of these patients is probably better than it would be without operation. Eighty-five to 90 per cent of patients who are operated upon for angina are alive five years later, including the operative mortality. This is in contrast with a five year survival of 80-90 per cent for single vessel disease, 60-70 per cent for two vessel disease, and 40-50 per cent in triple vessel disease in patients treated medically.

Similarly, the long-term survival of patients with unstable angina appears to be similar to that group who are operated upon for chronic angina. This is in sharp contradistinction to the relatively high 12 month mortality and myocardial infarction rate which such patients experience when treated with optimum medical management.

Physiologic changes: In addition to striking symptomatic relief and increased life expectancy compared with medical management, aortocoronary bypass may have additional benefits. It has been demonstrated that a number of patients have increased myocardial function and can exercise to a greater work output than was possible pre-operatively. On the other hand, although most patients who are symptomatically improved are not aware of any decrease in myocardial contractility post-opera-

tively, some patients have been demonstrated to have decreased myocardial contractility. This may be the result of perioperative myocardial infarction or some degree of myocardial fibrosis resulting from the operative events.

SUMMARY

Patients with angina pectoris who find that drug management is associated with an unacceptable degree of morbidity may be offered operative therapy with an excellent promise of symptomatic relief if their coronary arteries are satisfactory for bypass and they have adequate ventricular function. Patients who have had myocardial revascularization also have an improved long-term outlook from the point of view of death from coronary heart disease, particularly those who have had double and triple coronary bypass. Improvement in myocardial performance is less predictable, although the patient may have markedly increased exercise tolerance because he is not limited by his previous angina.

It is recommended, therefore, that patients with angina pectoris who continue to have an unacceptable morbidity on optimal management be evaluated for revascularization surgery.



Physician's Office For Rent

Equipped for Otolaryngologist

Also good location for Internist or General Practice.

DR. ULYSSE FORGET

600 Main Street

Warren, R. I. 02885

Call for appointment in the evening:

401-245-6888

USING PSYCHIATRIC CONSULTATION LIAISON SERVICE

(Continued from page 348)

pictions of depression, anxiety, hypochondriasis, hysteria, and malingering are entertained.

Questions of treatment imply that some diagnostic work has been done. These are usually questions of management, asking the consultant for help in dealing with the emotional overlay or the reaction to illness or hospitalization. Some common reactions to illness or hospitalization are anxiety, depression, denial, anger, and regression. Any patient can be expected to demonstrate some amount of one or more of these common reactions. Not all should require psychiatric consultation, but when medical management is compromised by these psychic reactions consultation is indicated. The following are examples of typical and frequent questions asked of the psychiatric consultant.

The fortyish male who has had perfect health and an active life before his first heart attack can demonstrate levels of denial and anger that can be life threatening. It is common enough to see such a patient try to continue running his business from his hospital room. He may even sign out of the hospital against advice if such activity is too vigorously discouraged, to the total dis-

regard of his physical condition. The chronically ill patient discouraged over his condition can become depressed and suicidal. Many of the drugs used in medical management, steroids and anti-hypertensives for example, have frequent psychiatric side effects. The patient who refuses a life-saving procedure or operation poses a problem. If the basis for his refusal is psychopathology, psychiatric management or even a statement declaring incompetence to decide the issue may be needed. The patient who is not emotionally prepared for a needed procedure such as amputation, hysterectomy, dialysis, mastectomy, or colostomy may need intervention by the consultant. The consultation may be needed prior to the procedure for preparation as well as after the trauma for adjustment to it. Chronic schizophrenics hospitalized in state facilities who are brought to the general hospital for illnesses unrelated to their mental disorders should routinely have the benefit of psychiatric consultation for management. The passive dependent or lonely patient who is in no hurry to end the comfortable secondary gain of hospitalization may consciously or unconsciously prolong his or her hospitalization. Confronting this patient may require psychiatric help.

For questions of disposition the psychiatric consultation service adds liaison to its name and function. The consultant on this service provides a link between medical services and psychiatric services of many forms. The liaison consultant should have a familiarity and working knowledge of all hospital and community resources available to the patient with psychiatric disorder. He has direct contact, rapport, and easy communication with the hospital social service and psychiatric nursing staff. He should have familiarity with services and agencies such as community mental health clinics, in-patient psychiatric hospitals, day care centers, sheltered work shops, state rehabilitation services, halfway houses, Alcoholics Anonymous, marriage counseling services, and drug addiction centers. He should be familiar enough with the private practitioners in the community, psychiatrists and psychologists, to know their special interests and favored treatment modalities. The consultants' familiarity with these agencies, their policies, and their physical facilities, as well as his rapport with their staffs will be directly proportional to his usefulness to the general hospital consultant. His usefulness is in knowing who should go where for what, much in the form of a triage officer for psychiatric problems.

NOTICE

MEMBERS OF A.C.S.

MEMBERS OF A.M.A.

Can get the "right answers"
about recent changes, and
how they may be affected,
by writing or 'phoning to:

R. A. DEROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

This trichotomy of diagnosis, treatment and disposition, of course, cannot be rigidly held. Questions of diagnosis imply both management and disposition. The overdosed patient who is admitted for medical management should automatically be involved in consultation. Intrinsic to the question of suicidal potential in an overdosed patient would be questions of both treatment and disposition. At Rhode Island Hospital this specific problem represents the most frequent reason for consultation. Forty-five per cent of all consultations are for the overdosed patient.

It should be emphasized that the consultant is in an excellent position not only to render useful help in diagnosis, management, and disposition of general hospital patients, but also to teach. Each consultation should be a useful learning experience for the consultor. If the consultant is available and communicative he can provide psychiatric information and experience to all services of the general hospital.

Psychiatric consultation liaison service is a new development. Lipowski⁵ dates its beginning from 1929. He describes its growth from 1934, when only five liaison departments were funded in the United States, to 1966 when 76 per cent of all psychiatric training centers offered instruction in this field. The growth of consultation liaison psychiatry demonstrates its importance and emphasizes the necessity of familiarizing each medical specialist with its function.

REFERENCES

¹Kaufman RM, Bernstein S: The psychiatrist in a general hospital, department of psychiatry, Mount Sinai Hospital, New York, NY.

²Vaillant GE, et al.: Psychological motives for Medical Hospitalization, *JAMA*, Nov 30, 1970, Vol 214, No. 9.

³Nigro S.: A Psychiatrists Experience in General Practice in a Hospital Emergency Room, *JAMA*, Nov 30, 1970, Vol 214, No. 9, PP 1657-1660.

⁴Bellak, et al.: Psychiatry in the medical-surgical emergency clinic, *Arch Gen Psych*, 10:267-269, 1964.

⁵Lipowski FJ: Consultation Liaison Psychiatry. An overview. *AJP*. Vol 131, No. 6, June 1974.



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

FAMILY PRACTICE TRAINING IN RHODE ISLAND

(Continued from page 350)

the hospital to "take over" a large portion of the practice of the community and compete with them for patients. This is *not* the case. In the first place, no patient will be accepted in the Family Care Center if he has a family physician in the community. There are plenty of patients who claim no family physician to more than meet the needs of the center. The center must be recognized for what it is, namely, a showcase where residents are taught how to practice family medicine. As such, the number of patients accepted is limited by the number of patients that can be seen comfortably within the limited time each resident has available to attend the clinic. It will certainly not offer prepaid health care to an unlimited number of individuals. It will not be open after hours. Patients who are members of the model Center requiring care will be seen in the emergency room of the hospital just as are many patients of physicians who practice in the community. The training program with its several new full-time physicians will not preempt the opportunity for prac-

ticing physicians to participate in the teaching of students or residents. Many of them will have appointments on the Family Practice Service where their talents will be utilized to the fullest.

OPPORTUNITIES AND BENEFITS

Finally, a look will be taken at the opportunities that will be created and benefits that may be gained by the existence of a program in family medicine at Memorial Hospital. This program will provide a training ground for an appreciable number of physicians who will be qualified to practice family medicine with a high degree of competence. Many of them undoubtedly will settle in the Blackstone Valley and other parts of Rhode Island, thus satisfying an obvious and long felt need.

A strong trend has recently been recognized among medical students in most schools for opportunities to learn about family practice under conditions conducive to learning. Some have participated in preceptorships, but they have not been wholly satisfactory. Clerkships on the Family Practice Service at Memorial Hospital will offer this opportunity to Brown medical students. In the same vein, there has been a sudden increase in the number of graduating medical students seeking training in Family Practice. In 1975 there were 2,200 applicants seeking about 1,400 approved first year positions in operating programs.

The program cannot help but enhance the quality of care rendered to patients in the hospital, out-patient clinics, the emergency room, and the Family Care Center because the quality of previous training of the residents, the greater breadth of their educational experience at Memorial Hospital, and the closer supervision of their work by experienced teachers. These factors will reflect upon the practices of physicians in the community.

In addition, because of the uniqueness of this program, its close affiliation with Brown University, and its existence in this highly intellectual area, special opportunities exist to train physicians who will become qualified teachers of family medicine. Many will participate in research activities that may involve various disciplines from the university such as anthropology, sociology, demography, and engineering and computer sciences to aid in demonstrating methods of expanding the horizons of medical practice.

Curran & Burton

DIVISION OF TEXACO. INC.

1120 Eddy Street

Providence, Rhode Island

HOpkins 7-8050

PRIME OFFICE SPACE FOR LEASE PAWTUCKET OPPOSITE MEMORIAL HOSPITAL

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

CALL ALLIED INVESTMENT
434-2974 or 433-0759



Report Of The House Of Delegates

A Summary of the Meeting of September 18, 1974

A meeting of the House of Delegates of the Rhode Island Medical Society was held on Wednesday, September 18, 1974. The meeting was called to order by the Speaker of the House, Dr. Herbert F. Hager at 8:05 p.m.

Delegates in attendance were: Drs. J. Douglas Nisbet, Charles B. Round, Joseph E. Wittig, Charles P. Shoemaker, George Lewis, Richard Zuerner, David Halimann, Richard Kraemer, Erwin Siegmund, Leonard S. Staudinger, Nathan Chaset, Stephen J. Hoyer, John P. Grady, Charles L. Hill, Frank W. Sullivan, Joseph E. Caruolo, Herbert Constantine, Dominic L. Coppolino, Joseph L. Dowling, Jr., Melvyn Gelch, Constantin S. Georas, Herbert F. Hager, John Coughlin, Robert V. Lewis, Henry M. Litchman, Vincent I. MacAndrew, William J. MacDonald, Peter L. Mathieu, Jr., Joseph B. May, Raul Nodarse, P. Joseph Pesare, Ralph E. Pike, James A. Reeves, Guy A. Settignano, Richard P. Sexton, D. Richard Baronian, Bertram H. Buxton, Joseph D. Dimase, William R. Thompson, Wilson F. Utter, Elihu S. Wing, Jr., David Newhall, and Edmund Hackman.

Ex officio in attendance were: Drs. Seebert J. Goldowsky and John Cunningham.

Delegates absent were: Drs. Carl V. Anderson, Robert E. Baute, Robert Brogan, Robert Fortin, Paul J. M. Healey, Richard Kuhn, Nathan Sonkin, James McGrath, Louis Morrone, Francis L. Scarpaci, J. Gerald Lamoureux, George V. Coleman, John A. Dillon, Martin E. Felder, Donald P. Fitzpatrick, Frank Giunta, Milton W. Hamolsky, Abraham Horvitz, Robert Indeglia, Samir G. Moubayed, Robert P. Sarni, and George H. Taft.

Ex officio absent were: Drs. Arnold Porter and Joseph E. Cannon.

Commissioners in attendance were: Drs. Leonard S. Staudinger, Kenneth Liffmann, Richard P. Sexton, and Melvin Hoffman. Dr. Thomas F. Head was out of town and excused.

Specialty Society representatives in attendance were: Drs. Ken Nanian, Henry M. Litchman, David Hallmann, Wilson F. Utter, Richard

Peters, Bence L. Schiff, Arthur I. Geltzer, Charles L. Hill, Joseph E. Caruolo, Marshall Taylor, and Melvyn Gelch substituting for Walter Cotter.

Specialty Society representatives absent were: Drs. David Barry (excused), Walter Cotter (excused), Charles E. Millard, Patrick A. Broderick, Louis V. Sorrentino and William F. Varr.

Also present were: Tim Norbeck, Executive Director; Lance D. Taylor, Assistant Executive Director of the Medical Society, and William Baltaks, Regional Director of the American Medical Association.

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the March meeting of the House had been printed and distributed by the secretary.

Action: A motion was made, seconded, and voted that the minutes of the March 6, 1974 meeting of the House of Delegates be approved as presented.

A MOMENT OF SILENCE

The Speaker asked the House of Delegates to rise for a silent prayer in recognition of Drs. Earl J. Mara, Alex Burgess and David Freedman, all of whom passed away recently.

REPORT OF THE SECRETARY

The secretary noted that his report was included
(Continued on next page)

PROFESSIONAL OFFICE SPACE FOR RENT

(In planning stage, for completion
Spring, 1976)

APPROXIMATELY 2,000 SQ. FT.
BROADWAY, PROVIDENCE

For Details:

Contact Joseph DiZoglio, M.D.
Edward Cardillo, M.D.
358 Broadway
Providence, RI
Tel. JA 1-2030

in the handbook. Action and comments on specific items follows:

8. *RIMS 1975 Annual Meeting*

President Chaset noted again that Dr. H. Sherwood Lawrence, Professor, head of section of infectious diseases and immunology at the New York University of Medicine, would be the 1975 Chapin Orator. The annual meeting will be held on April 16, 1975, at the Chateau de Ville.

15. *Building Handrail*

The President pointed out that the installation of an outside and inside handrail at the Rhode Island Medical Society building had been completed earlier in the day. Dr. Raul Nodarse thanked the officers of the Society and the House of Delegates for their approval of the project.

19. *Joint Meeting of Pediatrics Staff of St. Joseph's Hospital and the Council of Medical Staffs*

Secretary Round reminded the House of Delegates of the forthcoming meeting at the Old Canteen on Monday, September 23, (7:30 p.m.) and pointed out that the featured speaker will be Dr. Jose Garcia Oller, President of the American Council of Medical Staffs.

Action: A motion was made, seconded, and

voted that the report of the secretary, as a whole, be approved and placed on record.

REPORT OF THE TREASURER

Dr. Frank W. Sullivan noted that his report was included in the handbook for the meeting and mentioned that the RIMS would have enough of a surplus in 1974 to cover any deficit reflected in the budget for 1975.

Action: A motion was made, seconded, and voted that the auditor's report for 1973 be approved and placed on record.

Action: A motion was made, seconded, and voted that the report of the treasurer, as a whole, be received and placed on file subject to audit.

RECOMMENDATIONS FROM THE COUNCIL

Dr. Charles B. Round, Secretary, presented recommendations from the Council, and the following actions were taken:

1. *Benevolence Fund Trustee*

The House elected Dr. Alfred L. Potter for a three-year term, until 1977, as a trustee of the Benevolence Fund.

2. *Delegate and Alternate Delegate*

The House elected Dr. William J. MacDonald, of Providence, as Delegate and Dr. John J. Cunningham, of Pawtucket, as Alternate Delegate for the term of January, 1975, through December 31, 1976.

3. *Budget and Dues for 1975*

The House approved the proposed budget for 1975 and voted that the annual dues remain at \$100 for active members in practice for more than one year and \$50 for members in their first year of practice.

4. *Lobbyist*

The House approved the Council recommendation to empower the President to appoint a committee to look into the feasibility of hiring a lobbyist to represent the interests of the Rhode Island Medical Society within the limits of the current budget.

5. *Blue Shield Board of Directors*

The House elected Dr. Herbert Hager to fill the vacancy of Dr. Earl J. Mara on the Blue Shield Board of Directors.

6. *Blue Cross Board of Directors*

The House elected Dr. Joseph E. Caruolo to fill the unexpired term of Doctor Mara on the Blue Cross Board.

RESOLUTIONS

The Secretary presented four resolutions, as

PHYSICIAN'S OFFICE FOR RENT

RHIMFORD — RESIDENTIAL SECTION

FIRST FLOOR — 5 OR 6 ROOMS

FORMER FAMILY PHYSICIAN'S 19 YEARS

Call Evenings 521-6738

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.

RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

submitted to the House in the handbook for the meeting: one from Dr. Jay M. Orson, Chairman of the RIMS Child-School Health Committee, two offered by Seebert J. Goldowsky relative to smoking and unified membership, and one from Dr. Raul Nodarse pertaining to bank cards.

Action: A motion was made, seconded, and voted that the House table until the next meeting Doctor Orson's resolution which supports the development of comprehensive education programs of grades K-12 in the Public and Private schools of Rhode Island. It was emphasized by the speaker that this resolution was not defeated but that the House wished to discuss these comprehensive health education programs with the sponsor.

Action: A motion was made, seconded, and voted that the House endorse the resolution on unified membership which requests the Council of the RIMS to study and draft such bylaw changes, and recommend such other legal procedures as may be necessary to effect unified membership in the district societies, RIMS and the American Medical Association.

Furthermore, the council was directed to report its findings and recommendations at the next session of the House of Delegates.

The bank card resolution submitted by Dr. Raul Nodarse was referred to the Committee on Medical Economics for further study.

While considering Doctor Goldowsky's resolution on smoking, the House voted to take up the two resolved portions separately.

Action: A motion was made, seconded, and voted that smoking not be permitted at meetings of the House of Delegates of the RIMS.

Action: A motion was made, seconded, and voted that smoking not be permitted during reading hours in the Reading Room of the library of the RIMS.

Following the above actions on the smoking resolutions, Drs. Leonard S. Staudinger and John P. Grady submitted a minority resolution.

Action: A motion was made, seconded, and voted to set aside a smoking section at the House of Delegates' meetings for those who wish to smoke.

Following the approval of the minority resolution, the Speaker designated the back row of the auditorium as the smoking section.

RESOLUTIONS SUBMITTED DURING THE MEETING

Dr. Charles P. Shoemaker, of Newport, intro-

duced a resolution pertaining to the medical audit expenses related to PSRO.

Action: A motion was made, seconded, and voted that the House endorse the resolution which recommends that the extra financial burden for the medical audit of the PSRO program, which includes expenses for secretaries and surveyors, etc., be borne by a special budget of Blue Cross or other third parties rather than diverting funds from patient care.

Dr. John J. Cunningham, of Pawtucket, introduced a resolution objecting to the present Hospital Association of Rhode Island-Blue Cross contract discussions, which recommend the inclusion of concurrent review regulations to begin January 1, 1975.

Action: A motion was made, seconded, and voted that the RIMS opposes the inclusion of concurrent review regulations in the new Hospital-Blue Cross contract.

Dr. David Newhall introduced a resolution pertaining to the code of advertising for Blue Cross-Blue Shield sponsored HMOs.

(Continued on next page)

PROFESSIONAL OFFICE BUILDING

1339 Smith Street



Custom built 8 room Cape Cod medical building. Macadam parking lot for 9 automobiles. Prime location near Fatima Hospital.

W. HENRY
coleman
REALTORS

245-3050

Action: A motion was made, seconded, and voted that the House of Delegates disapprove of advertising by Blue Cross-Blue Shield for the benefit of selected physicians such as a specific prepaid group.

COMMITTEE REPORTS

The speaker noted that several of the committee reports were for information purposes only and called for no special action by the House. He asked for a motion to receive and file such reports.

Action: A motion was made, seconded, and voted that the Committees on Peer Review, Alcoholism, Medical Aspects of Sports, Scientific Work and Annual Meeting, Emergency Medical Services, Physicians and Carrier's Workmen's Compensations and Board of Trustees of the Medical Library be received and placed on record.

Dr. Joseph Caruolo presented an oral report on his Committee on the Delivery of Medical Care. He discussed the series of HMO networks in Rhode Island which have been proposed by Blue Cross-Blue Shield.

MISCELLANEOUS

President Chaset spoke on behalf of the forthcoming United Way Campaign and mentioned that a letter would be sent out soon to the members of the RIMS soliciting their financial support.

ADJOURNMENT

The meeting was adjourned at 10:25 p.m.

Respectfully submitted,

CHARLES B. ROUND, M.D.
Secretary

REPORT OF THE SECRETARY

Charles B. Round, M.D.

The Council has held three meetings since the previous meeting of the House of Delegates and the following constitute major actions taken:

1. The President was authorized to name a Nominations Committee to submit nominees for Delegate and Alternate Delegate from the Society to the American Medical Association for the term, January 1, 1975 through December 31, 1976.

2. The following were named to be the Society's official representatives on the Medical Economics Council of Rhode Island: Drs. Stanley D. Simon, John J. Cunningham, Philip Morrison, Thomas Perry, Jr., Charles B. Round, and Robert V. Lewis.

3. Approval was given for the Woman's Auxiliary to present an AMA-ERF check in the amount of \$4,109.99 sent to the Society as a contribution for the Brown University Medical School. Presentation was made by the Auxiliary at its 26th annual meeting in May.

4. The Council commended President Chaset for his personal communication to members relative to membership in the American Medical Association which resulted in a record AMA membership in Rhode Island.

5. Based upon a poll of member Blue Cross-Blue Shield subscribers, the Council approved the increase of the major medical contract limit of \$30,000 to \$250,000.

6. The Council approved of the recommendation of the Medical Economics Committee to continue the Society disability insurance program despite a 17.1 per cent rate increase.

7. Approval was given of the President's appointment as Trustee-at-Large to the Board of Trustees of the Medical Library for 1975 of Howard S. Browne, Jr., M.D., of Newport.

8. The Council was informed that Dr. H. Sherwood Lawrence, Professor, Head of Section of Infectious Diseases and Immunology at the New York University of Medicine, has been named as the 1975 Chapin Orator, and also that Dr. Malcolm Todd, President of the AMA, would address the Society's annual meeting on April 16, 1975.

9. The Council authorized President Chaset and Mr. Norbeck to seek and hire a qualified assistant executive director of the Rhode Island Medical Society.

10. The Council commended President Chaset for his communicative efforts with HEW Secretary Weinberger regarding the Economic Stabilization Act and price controls.

11. At the President's request and with the approval of the Council, the AMA performed an organizational and operational survey on the Rhode Island Medical Society in July. The survey team plans to report back on its findings and recommendations to the Council in November.

12. Approval was given of the President's appointment of Melvyn Gelch, M.D., to fill the unexpired term (December 31, 1975) of David Freedman as a Trustee of the Benevolence Fund.

13. The Council noted that under the chairmanship of Dr. John J. Cunningham, RIMPAC has joined with seven other states in achieving an all time high in the number of member contributions.

14. The following appointments by the President were approved by the Council:

Richard Mead, M.D., as Rhode Island Medical Society delegate to the U.S. Pharmacopeial Convention on March 22, 1975.

Johannes Virks, M.D., as representative on the ACI Subcommittee on Medical Care.

Charles E. Millard, M.D. and *Arthur I. Geltzer, M.D.*, as representatives on the Physicians Assistant Study Committee.

Robert L. Conrad, M.D., as representative on the Ambulance Service Coordinating Board.

Drs. Robert V. Lewis, John J. Cunningham, William J. MacDonald, Stephen J. Hoyer, Francis B. Sargent and Edmund T. Hackman, as the Rhode Island Medical Society delegates to the Council of New England Medical Societies.

15. The Council approved of the installation of an outside and inside hand railing for the Rhode Island Medical Society building.

16. The Council approved of a joint sponsorship of the Tel-Med Program by the Rhode Island Medical Society and the Rhode Island Department of Health. Costs of this program will be met entirely by the Department of Health.

17. The Council was informed that the President of the Society had named his appointed committees for 1974-75. (See Appendix A.)

18. Approval was given of the President's appointment of Drs. Robert Westlake and Rosario Tomaselli to the Medical Advisory Board to the Registrar of Motor Vehicles.

19. The Council was informed that the Pediatric staff of St. Joseph's Hospital and the Council on Medical Staffs will meet conjointly on Monday, September 23, at 7:30 p.m., at the Old Canteen Restaurant and that the main speaker will be Dr. Jose Garcia Oller, President, American Council on Medical Staffs.

20. The Council approved a recommendation that the Public Policy and Relations Committee of the Rhode Island Medical Society meet with representatives of Blue Shield to discuss the problems of physician advertising vs. HMO advertising and to determine the proper code of advertising for Blue Shield sponsored HMOs so as to present fairly the dual choice.

21. The Council approved the concept embodied in a letter from Dr. Peter Mathieu, President of the Providence Medical Association, to Doctor Chaset to expand the President's Council

of Medical Staffs from the present district concept to include participants from all Rhode Island hospitals.

22. The Council was informed that Mr. Edward J. Lynch had been named Executive Director of the RIPSRO, Inc. effective July 1. Mr. Lynch was presented with a plaque from the Council in recognition of his diligent and assiduous efforts over the past six years on behalf of the Rhode Island Medical Society.

23. Mr. Lance D. Taylor, of Chicago, was introduced to the members of the Council as the new Assistant Executive Director, having assumed these responsibilities in early September.

24. The Council was informed that Mrs. Mary Sciarra has joined the staff of Rhode Island PSRO. Mrs. Sciarra, a staff secretary at the Rhode Island Medical Society for five years, has done an excellent job for Rhode Island physicians and will continue these fine efforts with Rhode Island PSRO.

REPORT OF THE TREASURER

Frank W. Sullivan, M.D.

1. 1973 Professional Audit

Ward, Fisher and Company have completed their audit of our 1973 financial records and they have filed their report to me, stating that they have examined the records of the Society and the Medical Journal in accordance with generally accepted auditing standards and other procedures as were considered necessary. In their opinion the statement of cash receipts and disbursements present fairly the cash transactions of the Society and the Journal for the year ended December 31, 1973.

2. Agency Account

The most recent evaluation of the investments of the Society is appended as part of this report. In the opinion of the Bank's investment manager, our present holdings should be maintained as the account is adequately diversified in quality holdings.

3. Analysis of Membership Relative to Dues Payment

As of September 1 the Society had 1,207 members of whom 1,056 are subject to annual dues, while 151 members are exempt from dues payment for the following reasons:

Age	85
Retired from active practice	32
Military service	1
Illness or disability	13

(Continued on next page)

Postgraduate work	1
Residents	11
Fellowships	6
Clergy	1
Leave of absence	1

4. Budget for 1975

Under a bylaw requirement, I must submit at this time, a budget for the year starting next January 1. This task has been undertaken by evaluating our receipts and disbursements of 1973 as well as the records to date of the current year. I can only anticipate that non-dues income will continue as of the current year, and that we can maintain our anticipated disbursements in 1975 in spite of increasing costs of operation of the Society's activities.

RECOMMENDATIONS FROM THE COUNCIL

Charles B. Round, M.D., Secretary

1. Alfred L. Potter, M.D., of Providence, is re-nominated for a three-year term as a Trustee of the Benevolence Fund of the Society. (The other Trustees are George W. Waterman, M.D. (1976) and Melvyn Gelch, M.D. (1975).

2. As nominees for Delegate and Alternate Delegate to the AMA for the term January 1, 1975 through December 31, 1976, the Council submits:

William J. MacDonald, M.D. (Providence) as Delegate

John J. Cunningham, M.D. (Pawtucket) as Alternate Delegate

3. The Council, having reviewed and approved the 1975 budget, recommends at this time that the annual dues remain at the current rate of \$100 for members in practice more than one year and \$50 for those in their first year of practice.

4. The Council recommends that the President be empowered to appoint a committee to look into the feasibility of hiring a lobbyist to represent the interests of the Rhode Island Medical Society within the limits of our current budget.

5. The Council recommends the following nominees to be considered for election to fill the vacancy of Dr. Earl J. Mara on the Blue Shield Board of Directors:

John J. Cunningham, M.D.

John P. Grady, M.D.

Herbert Hager, M.D.

The House must also elect one member from the current Blue Shield Board of Directors (members listed below) to replace Doctor Mara on the Blue Cross Board of Directors, the term to expire in 1976:

Paul E. Barber, M.D.

Joseph E. Caruolo, M.D.

Edmund T. Hackman, M.D.

Thomas F. Head, M.D.

Robert V. Lewis, M.D.

William J. MacDonald, M.D.

Frederick A. Peirce, Jr., M.D.

Stanley D. Simon, M.D.

Leonard S. Staudinger, M.D.

John J. Walsh, Jr., M.D.

RESOLUTION ON HEALTH EDUCATION

Whereas, The Congress of the United States has resolved that health education in the schools has the potential for enhancing the quality of life, raising the level of health for the student's lifetime by significantly reducing those health problems susceptible to intervention and favorably influencing the learning process;

Whereas, The provision of a comprehensive program with respect to health education and health problems for children and youth of the nation should be given high priority;

Whereas, Most children and youth of the nation now do not have an opportunity to participate in comprehensive health education programs, since health education in many schools either is nonexistent or is provided on a fragmented and inadequate basis, and;

Whereas, Health education refers to a plan that provides for the sequential arrangement of learning opportunities designed to favorably influence health attitudes, practices, and cognitive skills that are conducive to the optimum development of the individual, the family and the community.

Be It Resolved, That the House of Delegates of the Rhode Island Medical Society concurs with the Congress of the United States and wholeheartedly supports the development of comprehensive health education programs in grades K-12 in the public and private schools of Rhode Island and that this resolution be disseminated to the people of Rhode Island through the news media.

JAY M. ORSON, M.D.

Chairman

Child-School Health Committee

Rhode Island Medical Society

RESOLUTION ON SMOKING

Whereas, It is generally agreed that smoking is detrimental to health; and

Whereas, Inhaling of air laden with tobacco smoke is disagreeable and may be detrimental to the health of non-smokers, particularly to those with respiratory disorders; and

Whereas, Non-smokers, who constitute a majority of the population have rights which should be recognized; and

Whereas, The AMA has barred smoking at the meetings of its House of Delegates; and

Whereas, The Rhode Island Medical Society takes official cognizance of the smoking problem by participating as a member agency in the programs of the Interagency Council on Smoking; therefore

Be It Resolved, That smoking not be permitted at meetings of the House of Delegates of the Rhode Island Medical Society; and further

Be It Resolved, That smoking not be permitted any time in the Reading Room of the Library of the Rhode Island Medical Society.

SEEBERT J. GOLDOWSKY, M.D.

RESOLUTION ON UNIFIED MEMBERSHIP

At the present time most district medical societies in Rhode Island do not require membership in the Rhode Island Medical Society. The Rhode Island Medical Society in turn does not require membership in the American Medical Association. As a result of these permissive policies and bylaws, there are some 50 district society members who are not members of the Rhode Island Medical Society, and some 500 members of the Rhode Island Medical Society who are not members of the American Medical Association.

Physicians of both groups have the advantages of the support of organized medicine locally and nationally without assuming the reciprocal obligation of supporting the state and national societies. The AMA is the only national organization that represents all physicians. In return it needs their support in its extensive programs in legislation, quality of care, education, manpower, and the inter-relationships with the many other organizations involved in medical care problems. Further, the increased Rhode Island membership in the AMA will entitle it to another delegate in the AMA House of Delegates,

At the present time six states — Arizona, California, Hawaii, Illinois, Oklahoma, and Wisconsin — already have unified membership. During the present year three additional states — New York, New Jersey, and Missouri — have voted to join the group in 1975. Several other states have this change under consideration. It is significant that the three largest states — California, New York, and Illinois — all have unified membership.

It is time that the Rhode Island Medical So-

ciety gave serious study to this important change in policy which will require not only bylaw changes in the district and state societies, but also a change in attitudes.

The following Resolutions are presented to initiate the necessary actions to effect these changes:

Be It Resolved, That the Council of the Rhode Island Medical Society be requested to study and to draft such bylaw changes as may be necessary and to recommend such other legal procedures as may be necessary to effect unified membership in the district societies, the Rhode Island Medical Society, and the American Medical Association; and

Be It Further Resolved, That the Council report its findings and recommendations at the next session of this House of Delegates.

SEEBERT J. GOLDOWSKY, M.D.

(To be Continued)

MAKE YOUR VOICE

HEARD IN THE

REVIEW PROCESS

• • •

Join RIPSRO

• • •

OVER 900

PHYSICIANS HAVE

ALREADY JOINED.

Book Reviews

DIAGNOSIS AND TREATMENT OF THYROID DISEASES by Kenneth Sterling. Cleveland, CRC Press, Inc., 1975. \$26.95

The major justification for another textbook dealing with the thyroid gland would be the successful realization of the author's declared intention to provide a "concise, easily understood discussion of diagnosis and treatment of thyroid diseases, suitable for physicians, physiologists, biochemists"

In the first 64 pages Doctor Sterling presents, briefly and sequentially, a schema of iodide metabolism, the nature of the serum iodine (including the thyroid hormones), the phenomena of serum protein binding of thyroid hormones, a more detailed discussion of the basic physiological and clinical significance of triiodothyronine (T-3), and a brief survey of the major tests of thyroid function.

In the concluding 39 pages (total, 103 pages) he summarizes in a more discursive and subjective manner his personal reflections on methods of treatment of hyperthyroidism, replacement therapy of hypothyroidism, thoughts on non-toxic goiter, thyroid carcinoma, thyroiditis, mechanisms of hormone action, and theories of pathogenesis of thyroid diseases.

Sterling and his colleagues have made significant contributions to our current knowledge of basic thyroid physiology and biochemistry. The major strength of this monograph reflects his early and continuing contributions to studies concerning triiodothyronine (T-3), the "other" major thyroid hormone (with thyroxine or T-4). He presents in detail methods for measurement of T-3 in human serum and, with this powerful new tool, serum T-3 levels in the various states of thyroid function. He recounts the emergence of the new entity "T-3 — toxicosis" — to explain for the clinician the patients who present with symptoms and signs of hyperthyroidism but, paradoxically, normal (or low) serum values of PBI, T-4, and T-3 uptake. The paradox is now explained by the high T-3 serum levels in such patients who do not appear to differ in any other way (age, sex, signs or symptoms, response to therapies, prognosis) from the "classical" thyrotoxic patient. Normal serum T-3 circulating levels in the face of low PBI, serum T-4, or T-3 uptake test results also explain the apparent euthyroid state of such patients and their failure to respond to thyroid

replacement therapy for the low PBI or T-4 levels since they are physiologically euthyroid. The clinician is reminded that he must differentiate clearly between the "older" T-3 uptake tests (which reflect serum binding of thyroid hormones) and the "newer" T-3 serum level which measures the actual concentration (in picograms per cent) of circulating triiodothyronine (as does the T-4 serum level for actual serum thyroxine concentration). The interested reader will also find an authoritative treatment of T-3 kinetics, the extra-thyroidal conversion of T-4 to T-3, and a helpful summary of clinical abnormalities of serum T-3 concentrations.

Complementary to this detailed and comprehensive exposition of the important new developments relating to T-3, the remainder of the monograph summarizes, more briefly and sketchily, other basic and clinical components of thyroid physiology and disease and gives major references to their more complete exposition. The monograph, therefore, is of primary value as a reference source for recent developments relating to triiodothyronine and as a brief overview of other components of basic and clinical thyroidology.

MILTON HAMOLSKY, M.D.



BIKINI DOCTOR FIRED

SALINA, Italy — Dr. Caterina Arena, 28, was fired from her job at the local hospital after she made a round of the wards dressed only in a bikini.

... ASSOCIATED PRESS REPORT



*Get your family
together for the
Portrait you have
been promising
yourself!*

Call now for an appointment!

353-2694

D. A. Gunning Studio

14 Homewood Ave.

N. Providence, R.I.

THE STORY OF MEDICINE by Petros de Baz,
New York, Philosophical Library, Inc., 1975,
\$6.00.

A nice "story" of medicine, not pretending to be
a history in, 99 pages.

It lists the interesting features of the firsts. The
first hospital, the first transfusion, and others. From
the dust jacket flap we learn that the author was
an "Assyrian" and practiced medicine in the Mid-

dle East for 43 years. He was particularly inter-
ested in tropical diseases. Not everyone is familiar
with medicine in Mesopotamia, Egypt, China, In-
dia, and Iran, and this part of the book is of par-
ticular interest. A second part is devoted to famous,
but little known Assyrian and Arabian physicians
and to treatment in ancient times.

Well worth reading.

F. RONCHESE, M.D.



ANNOUNCEMENT

The American Philosophical Association has established a Committee on Philosophy and Medicine which will develop special programs at meetings of the American Philosophical Association. In addition, the Committee will distribute a newsletter including bibliographical and pedagogical information, lists of persons actively interested in philosophy and medicine, announcements of conferences, and other materials. Persons wishing to be on the Committee's mailing list should write providing the following information: Name, address, institutional affiliation, professional field, primary interests in philosophy and medicine (e.g., ethical issues in clinical medicine, epistemology of medicine, etc.) and any relevant teaching experience or plans (e.g., undergraduate course in medical ethics, lectures in nursing school, etc.). Enclose \$2.00 to cover mailing costs. The Committee comprises H. Tristram Engelhardt, Jr. (University of Texas Medical Branch, Galveston), Holly Goldman (Michigan), Samuel Gorovitz (Maryland), John Ladd (Brown) Chairman, David Mayo (Minnesota, Duluth), and William Ruddick (NYU). Write to: Professor John Ladd, Committee on Philosophy and Medicine, Department of Philosophy, Brown University, Providence, Rhode Island 02912.

Fiske Fund Prize Dissertation 1975

The Trustees of the Fiske Fund of The Rhode Island Medical Society announce the following for the Prize Dissertation of 1975:

Rhode Island Medicine in the American Revolution

For the best essay on the subject worthy of a premium they offer a prize of \$1,000. The dissertation will be particularly graded on the basis of original work by the author. The competition is not restricted to physicians. Each competitor for the premium is expected to conform with the following regulations:

To forward to the secretary of the Trustees on or before the fifteenth day of December, 1975, free of all expense, *a copy of his dissertation with a motto thereon, and also accompanying it a sealed envelope bearing the same motto inscribed on the outside with his name and address within.* The author's name should *not* appear on the title page of the manuscript.

Previous to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title and interest in and to the same, for the use, benefit, and advantage of the Fiske Fund.

Dissertations, other than the successful ones, will be returned to the authors.

The dissertations must be typewritten, double spaced on standard typewriter paper and should not exceed 10,000 words.

TRUSTEES, CALEB FISKE FUND RHODE ISLAND MEDICAL SOCIETY

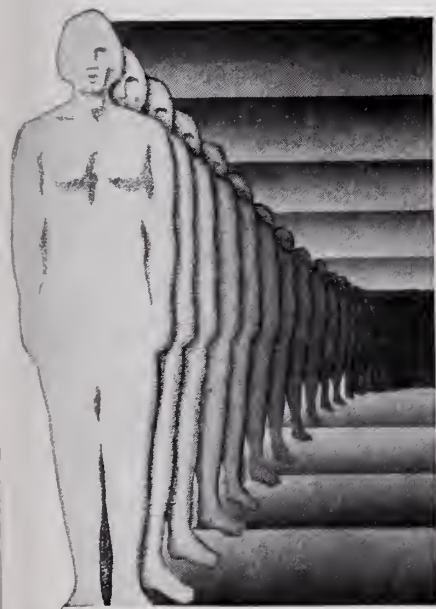
Secretary

Mrs. Helen E. DeJong
106 Francis Street
Providence, Rhode Island 02903

Stephen J. Hoyer, M.D.
Herbert F. Hager, M.D.
Philip J. Morrison, M.D.

PERFORMANCE. IT'S A MATTER OF RECORD.

- an unsurpassed record validated in several thousand clinical papers
- rarely interferes with mental acuity
- wide margin of safety



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous

occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 to 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* *Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRIUM®

chlordiazepoxide HCl/Roche
5mg, 10mg, 25mg capsules

**IN PAINFUL
ACUTE
CYSTITIS***

*nonobstructed;
due to susceptible
organisms



LIBRARY

APR 23 1976

**NEW YORK ACAD
OF MEDICINE**

RELIEVE THE PAIN WHILE YOU ELIMINATE THE PATHOGENS.

FOR THE PAIN

- ☐ Early relief of painful symptoms such as burning and pain associated with urgency and frequency.

FOR THE PATHOGENS

- ☐ Effective control of susceptible pathogens such as *E. coli*, *Klebsiella-Aerobacter*, *Staph. au-*

reus, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

Appropriate antibacterial therapy: Up to 3 days therapy with Azo Gantrisin 4 to 6 tablets *Stat.*, then 2 tablets *q.i.d.*; then 11 days with Gantrisin (sulfisoxazole) may be considered.

AZO GANTRISIN®

(50 mg phenazopyridine HCl and 0.5 Gm sulfisoxazole)

Before prescribing, please consult complete product information, a summary of which follows.

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

Important Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia.

Allergic reactions: Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, edematous necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, periph-

eral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

September 1975

R.I. Medical Journal

Vol. 58 No. 9

Rhode Island

BALCONY



ALCOHOLISM IN MEDICAL EDUCATION

Both often



Predominant
psychoneurotic
anxiety

Associated
depressive
symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizure may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuation (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Seizure-addiction-prone individuals under ca

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) provides relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam) 2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

caution because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider the cumulative pharmacology of agents employed; drugs such as phenothiazines, barbiturates, MAO inhibitors, and other antidepressants may potentiate sedation. Usual precautions indicated in severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

SEPTEMBER, 1975

VOLUME 58, No. 9

EDITORIAL STAFF

Editor-in-Chief	Seebert J. Goldowsky, M.D.
Managing Editor	Timothy B. Norbeck
Ass't Managing Editor	Lance D. Taylor
Managing Editor Emeritus	John E. Farrell, Sc.D.

John F.W. Gilman, M.D., Chairman
*John A. Dillon, M.D., Acting Chairman
*Stanley M. Aronson, M.D.
*Bertram H. Buxton, Jr., M.D.
Robert P. Davis, M.D.
*Herbert Fanger, M.D.
Pierre M. Galletti, M.D., Ph.D.

*Charles A. Hall, Jr., M.D.
Robert V. Lewis, M.D.
*Peter L. Mathieu, M.D.
*Jay M. Orson, M.D.
Henry T. Randall, M.D.
*Guy A. Setticone

(*Also Member Publications Committee)

TABLE OF CONTENTS

I. BROWN UNIVERSITY ALCOHOLISM CONFERENCE: INTRODUCTION	
Levi C. Adams and Stanley M. Aronson, M.D.	387
II. KEYNOTE ADDRESS: HOW FUTURE PHYSICIANS MUST SEE THE ALCOHOLIC	
Malcolm C. Todd, M.D., F.A.C.S.	389
III. ON UNDERGRADUATE EDUCATION: ALCOHOLISM EDUCATION IN A MEDICAL SCHOOL	
Willem G. A. Bosma, M.D.	391
IV. ON GRADUATE EDUCATION: ALCOHOLISM INSTRUCTION IN GRADUATE MEDICAL EDUCATION	
Kenneth H. Williams, M.D.	393
V. BROWN UNIVERSITY ALCOHOLISM CONFERENCE: A SUMMARY OF THE DISCUSSIONS	
Pierre M. Galletti, M.D., Ph.D.	396
EDITORIALS	398
EDITOR'S MAILBOX	399
PRESIDENT'S PAGE	375
MESSAGE FROM THE DEAN	373
BOOK REVIEW	414

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island, Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

MEDICAL EVENTS CALENDAR

OCTOBER

- 2 "Primary and Secondary Prevention in Psychiatry," Leon Eisenberg, M.D., Professor and Chairman, Department of Psychiatry, Harvard Medical School. 4:30 p.m.-6:00 p.m., Ruggles Room, Butler Hospital.
- 8 "The Use of Anti-Neoplastic Agents in Non-Neoplastic Disease," a one-day symposium featuring Brown University faculty. 8:30 a.m. to 4:00 p.m., Andrews Hall, Brown University. This program has been approved for 6½ hours of credit from the AAFP. A registration fee will be charged. For information, call 863-2815.
- 9 "Interstitial Pulmonary Emphysema in the Newborn," Doctor Eric Burnard, Crown Street Women's Hospital, Sydney, Australia. 10:00 a.m., WIH Auditorium, Women and Infants Hospital.
- 10 "The Physiology and Treatment of Hypertonic Dehydration in Infants," Laurence Finberg, M.D., Professor and Chairman, Department of Pediatrics, Medical Center of the Albert Einstein College of Medicine. 10:30 a.m., Kay Auditorium, Roger Williams General Hospital.
- 16 "The Nature and Uses of Behavior Modification Therapy," John Paul Brady, M.D., Chairman, Department of Psychiatry, Hospital of the University of Pennsylvania. 4:30-6:00 p.m., Ray Hall, Butler Hospital. A small admission fee will be charged; for information call 521-3400.
- 23 "Assertiveness Training," Eileen Ganbrill, Ph.D., Lecturer, School of Social Welfare, University of California at Berkeley. 4:30-6:00 p.m., Ray Hall, Butler Hospital. See October 16 listing.
- 24 "Molecular Biology of Diphtheria," The Thirteenth Annual Charles A. Stuart Memorial Lecture, Doctor Alwin Max Pappenheimer, Jr., Professor of Biology, Harvard University. 4:30 p.m., Room 168, Barus Holley Building, Brown University.
- 30 "Behavior Modification Applied to a County Mental Health Center: A Demonstration Project," William Goodson, M.D., Associate Clinical Director, Huntsville, Alabama. 4:30-6:00 p.m., Ray Hall, Butler Hospital. See October 16 listing.

- 31-Nov. 1 "Recent Advances in Medicine," American College of Physicians Annual Regional Meeting. Friday Sessions at Colonial Hilton Inn; Saturday morning sessions at Earus-Holley Hall, Brown University. Advance registration is required. For information, call 863-2815. This program has been approved for 9 hours of credit towards the Physicians Recognition Award of the AMA, and 9 hours of credit from the AAFP.

NOVEMBER

- 5 "Advances in Pediatric Diagnosis and Therapy," The 12th Annual Maurice N. Kay Pediatric Symposium, featuring panel discussions and presentations on "Practical Identification of Immunological Disorders in Children," "Slow Virus Infections in Children," "Growth Hormone, Somatomedin and Growth," and "Nephrotic Syndrome." 9:00 a.m. to 5:00 p.m., Kay Auditorium, Roger Williams Hospital.
- 6 "Behavioral Assessment and Treatment of Alcoholics: A Clinical Perspective," Peter E. Nathan, Ph.D., Professor of Psychiatry and Psychology, Director of Alcohol Behavior Research Laboratory, Rutgers University Medical School. 4:30 p.m.-6:00 p.m., Ray Hall, Butler Hospital, See October 16 listing.
- 13 "Behavioral Treatment of Marital Problems," Richard B. Stuart, D.S.W., Director, Marriage and Family Treatment Center, University of British Columbia
- 22 "Hematologic Problems in Surgery," presented by the Brown University Section of Surgery and American College of Surgeons Rhode Island Chapter. Topics will include: Recent Advances in the Prevention and Management of Thromboembolism; Surgery in the Myeloproliferative Diseases; Disorders of the Blood Platelet: A frequent Cause of Excessive Post-Operative Hemorrhage; Disseminated Intra-Vascular Coagulation; and a panel discussion with all speakers. 8:30 a.m.-12 noon, George Auditorium, Rhode Island Hospital.



BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

FAMILY PRACTICE EDUCATION—A PROGRESS REPORT

Education in family Medicine has made its debut in Rhode Island. The Brown University-Pawtucket Memorial Hospital Residency Program in Family Practice commenced on July 1, 1975, with the arrival in the State of Rhode Island of eight recent medical school graduates desirous of post-graduate education in Family Medicine. They have come from as far west as Hawaii and the State of Washington and they include one of the "charter twelve" graduates of the Brown University Program in Medicine.

The complex task of assembling the elements of a superior residency program continues. The initial building blocks are in place, accreditation by the American Medical Association has been achieved, and the educational process is ongoing; but much remains to be done. The challenges to produce, in the short span of three years, a physician capable of providing primary and continuing care to all members of the family, commencing *in utero* and extending to the grave, are many and complex. The mobilization and deployment of the resources necessary to accomplish this task will take many months and "fine tuning" of the curriculum will go on for years.

The residency program is designed to provide both hospital and ambulatory care experience. Inpatient education is planned in the traditional manner: the residents spend blocks of time on various services at The Memorial Hospital under the supervision of appropriate specialists and generalists. Approximately twelve months will be spent in Internal Medicine, six months in Pediatrics, and months in Obstetrics and Gynecology, two months in Surgery, and one month in the Emergency Room.

There is ample time left open for elective experiences. The ambulatory care training is less conven-

tional: a model Family Care Center has been established on the grounds of The Memorial Hospital where the residents, in essence, will establish themselves in the practice of medicine while they are obtaining their in hospital training. The residents are assigned their own patients and families, whom they will care for throughout the three-year training period; in this way, they begin functioning as family physicians immediately after graduation from medical school. As the program proceeds, residents in various years of the residency program will be organized into small groups to provide seven-day, twenty-four hour service to their patients, as well as continuity of care when they graduate from the program. We expect that a significant number of residents will elect to practice in the Pawtucket area, and, if they do, they will be able to take their patients with them if the patients so desire.

Behavioral science and psychiatry are taught throughout the program by a team of psychiatrists, social scientists, family physicians, and other specialists. Rather than isolate this form of education from the mainstream of patient care, we have integrated it into the resident's activities on the wards and in the Family Care Center. This segment of the program has been highly experimental but has, thus far, been very successful; the "old hands" on the faculty are learning as much as the residents!!

Family Medicine is the newest of the AMA recognized specialties in medicine and the Brown University Program at The Memorial Hospital is the first new postgraduate medical educational program in Rhode Island in many years. These landmarks presage a change in the orientation of medical education which, although it originated in the

(Continued on next page)

family practice movement, has now spilled over into other programs, notably Internal Medicine and Pediatrics.

The education of physicians cannot be internally focused, professionally preoccupied, and largely committed to discipline and technology. Physician education should be oriented to the needs of patients and the societies they comprise. Social need must be the fuel which drives the engine of professionalism. Hermetically sealed physicians committed principally to disciplines rather than populations are a luxury we no longer can afford. In the words of Doctor Robert Petersdorf, the principal spokesman for educators in Internal Medicine. "This will require a reorientation of our post-grad-

uate training programs . . ."¹ Family Medicine education has, indeed, already had broad impact and the patient will be the beneficiary.

The patient is being heard. Lessons are being learned by the educators. Medical care in the coming decade will reflect the changes wrought by the Family Medicine movement during the 1970s. Brown University and The Memorial Hospital are pleased to be part of this exciting new movement in medical education which promises so much for the residents of the State of Rhode Island.

REFERENCE

¹Petersdorf, RG: *Bull Am Coll Physicians* 16:19, Sep 75

DAVID S. GREER, M.D.
Associate Dean of Medical Affairs
Brown University



PAWTUCKET MEMORIAL HOSPITAL

43rd ANNUAL JOHN F. KENNEY CLINIC DAY

WEDNESDAY, NOVEMBER 5TH

MAIN SPEAKER

1:30 P.M.

Francis D. Moore, M.D.

Chief of Surgery, Peter Bent Brigham Hospital, Mosley Professor of Surgery, Harvard Medical School

TOPIC:

Aggressive Treatment of Cancer of the Breast

Panel Discussion to follow

MORNING SESSION FOR PRESENTATION OF PAPERS BY
THE MEDICAL STAFF

President's Page

By Stephen J. Hoye, M.D.

THE PATIENT WINS!!

On September 29, 1975, the people of Rhode Island won a victory as a result of the order of the State Director of Business Regulation to roll back 40 per cent of malpractice insurance premiums charged to the physicians of this state by the Joint Underwriting Authority. The patient pays! — Therefore, the patient wins!! And that is basically what the Medical Society is trying to do — to help you to help your patient!!

The rollback is a direct result of testimony before the Governors Malpractice Commission meeting of Mid-August when an independent actuarial analysis convinced Director Liguori that the initial rates were set too high. Now, if the Commission can continue these positive steps and come out with remedial legislative measures which will improve the malpractice insurance climate in Rhode Island and check the escalating premiums which must be passed on to our patients, we will have accomplished a part of the task we started last spring.

But it hasn't been easy! For many of us in the front ranks, this has been the "meetingest" period that any of us can remember! Representatives on the Governors Malpractice Commission; representatives on the JUA Board of Directors; regular and special meetings of the Council of the Medical Society; regular and special meetings of the House of Delegates; and the RIMS Malpractice Commission Meetings!!! and we've just begun to fight!!

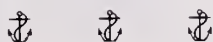
SO, HOW ABOUT YOU?!

For ammunition, we asked the members of RIMS for only two things—HAVE YOU RESPONDED?

1. Two mailings — requesting your personal malpractice data — to be kept confidential — and to date 325 members have not responded!! How about it? Would you like to admit publicly that 25 per cent of the membership has not responded?
2. The House of Delegates voted a *mandatory* \$50.00 assessment for public relations needs for malpractice education and to date three quarters of the members have not responded!!! With that kind of back-up support, who wants to be in the front lines!! With those kind of friends — who needs enemies!?! And some paying "under protest"!! I'd like to "protest" those weekly or biweekly meetings I attend also — so just tell me as a body to stop representing you — and I'll gladly return to my practice — what's left of it!!!!

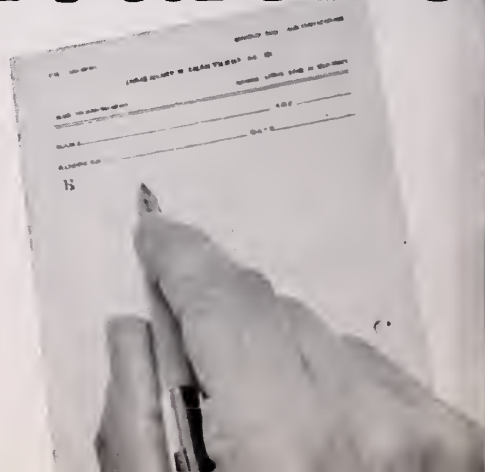
So, if you want us to represent you — show us your support — where it means something — and STOP WITH THE LIP SERVICE!!! Give us the ammunition we need — to work for you and our patients!

PLEASE!!





Bioequivalence



The weight of scientific opinion:

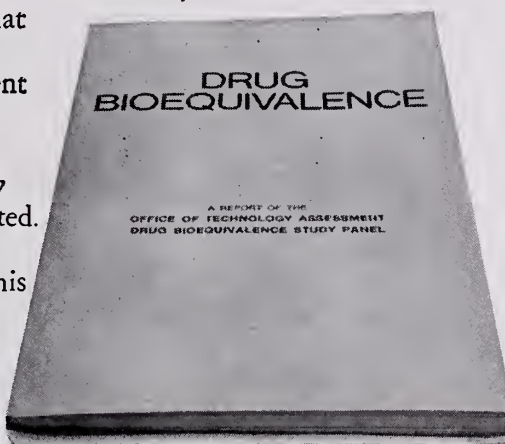
If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content is the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalence in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, or controls are adequate to ensure

that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and

(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...



Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

Help stop the tears

**of colic, diarrhea
or similar malady.**

Use i-Soyalac.

i-Soyalac and regular Soyalac are palatable, readily digestible and assimilated. It simulates human milk in appearance, taste and texture. It is complete with vitamins and minerals. It is suitable for infants and children who are sensitive to or cannot tolerate cow's milk.

For nearly a quarter of a century, Soyalac has proven its value in promoting growth and development—as shown by extensive clinical data.

Available in four forms: i-Soyalac Concentrated, Soyalac Concentrated, Soyalac Ready-to-Serve, and Soyalac Powder.



i-Soyalac from isolated protein without corn.

Send to: Loma Linda Foods
Medical Products Division
Riverside, Calif. 92505

Please send me free sample and literature.

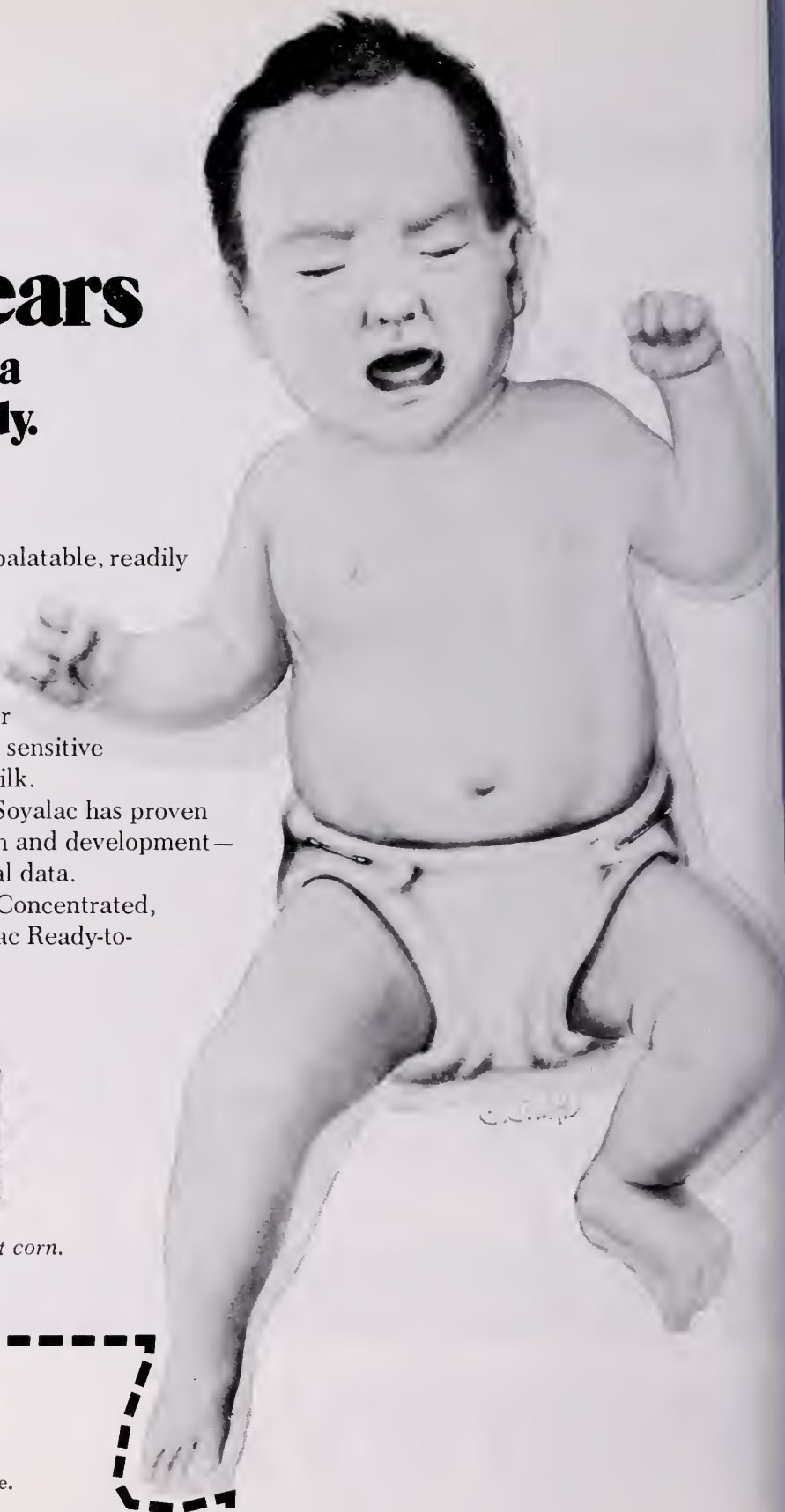
Name _____

Address _____

City _____ State _____ Zip _____

Or a simple note on your prescription form will do.

SJ-9





Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."¹⁸

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:

100 mg. phenylbutazone USP

100 mg. dried aluminum hydroxide gel USP

150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

**Fire fighter
for arthritic
flare-ups.**

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.
Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty. **Indications:** Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction, hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpre-

dictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia. **Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dys-

pepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement. (B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardley, New York 10502

BU 10259

MAL- PRACTICE QUESTIONS ???

**Depend on
Starkweather & Shepley
for the answers
and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.



ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

55 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900



R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

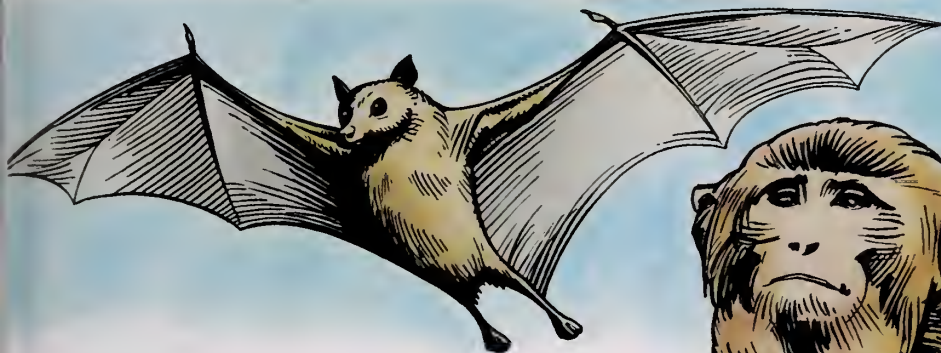
Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.



The **ALLBEE[®] with C** Scrapbook of Vitamin Facts & Fallacies

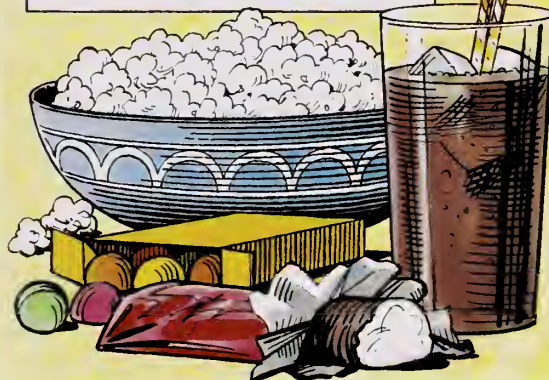


The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.



De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food." The disease he described was probably scurvy.

A 1965 U.S.D.A. survey revealed that American diets were lower in vitamin C than they had been 10 years earlier!



The outer leaves of cabbage and brussels sprouts contain more vitamin C than the heads. Yet, ironically, these are often trimmed away by the grocer to improve appearance and enhance sales appeal! Many housewives trim them even more before cooking!

Available on your
prescription or
recommendation

ALLBEE[®] with C

High Potency
B-Complex and
Vitamin C
Formula



A.H. Robins Company, Richmond, Va. 23220 **A-H-ROBINS**



Spasm reactor?

Donnatal!®

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyosine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	($\frac{1}{4}$ gr.) 16.2 mg	($\frac{1}{2}$ gr.) 32.4 mg	($\frac{3}{4}$ gr.) 48.6 mg.
(warning: may be habit forming)			

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), or hypersensitivity to any of the ingredients.

A·H·ROBINS A·H·Robins Company Richmond Virginia 23220

When your number comes up, will you be ready?



There are lots of ways to make \$1,000,000. Unfortunately, you can't count on any of them.

But if you should ever find yourself looking for more reliable ways to help your investments grow, we can help.

First, because we bring years of professional experience to your investment situation, we can help you do a better job of defining your investment

objectives.

And secondly, if our record of making money grow is any indication, we're almost sure to be a help in attaining those objectives. In fact, we'll gladly match our performance

record against anybody else's.

Call Mr. Evans at 278-6607. You can count on him to show you how easy it is to make the necessary arrangements. And you'll probably find that the service costs much less than you think.

Trust & Investment Division, Industrial National Bank, 100 Westminister Street, Providence, Rhode Island 02903.

IN BANK
Industrial National Bank

Something extra in Investment Management.

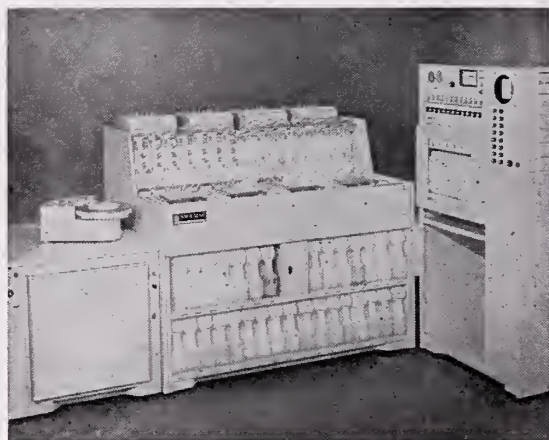
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D.

DONALD MATTERA
B.S. M.T. (ASCP)

HEALTH HAVENS

**A SKILLED NURSING HOME
MEDICARE PARTICIPATING**



Registered Professional Nurses On All Shifts

Dietician Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence

Tel. 438-4275

JCAH Accredited

NOTICE

ALL PHYSICIANS IN RHODE ISLAND!!

CHANGING ECONOMIC CONDITIONS,
INCREASING LOSS RATIOS
and

INSUFFICIENT PREMIUM RESERVES ARE BEGINNING TO BRING ABOUT DRASTIC CHANGES

in

NATIONAL AND REGIONAL
ASSOCIATION GROUP DISABILITY
INCOME POLICIES!!

Those Members who would like further information of the impending problems of "Mail-Order" Insurance which lie just ahead may obtain further information by contacting us via 'phone or mail.

— NO OBLIGATION —

R. A. DESROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660



Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

and useful in the management of vertigo* associated with diseases affecting the vestibular system.
To relieve nausea and vomiting often associated with vertigo.*
Usual adult dosage for Antivert/25 for vertigo*: one tablet t.i.d.
Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
Antivert/25 (meclizine HCl) 25 mg. Chewable Tablets for nausea, vomiting and dizziness associated with motion sickness.

SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Probably Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.


Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG **Pfizer**
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert[®]/25 (meclizine HCl) 25 mg. Tablets for vertigo*

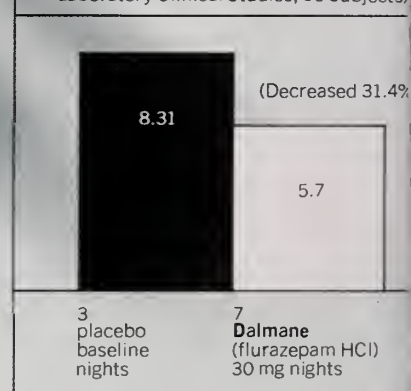


Would sleep with fewer nighttime awakenings benefit your patients with insomnia?

Highly predictable results for your patients with trouble staying asleep...

...can be obtained with Dalmane (flurazepam HCl). As shown below, Dalmane significantly reduces nighttime awakenings:¹

Average Number of Nighttime Awakenings
(Four Geographically Separated Sleep Research Laboratory Clinical Studies, 16 Subjects)



And for those with trouble
ing asleep or sleeping
g enough...

Dalmane (flurazepam HCl)
delivers excellent results.
ically proven in sleep research
laboratory studies: on average,
p within 17 minutes that lasts
8 hours.⁵

Dalmane (flurazepam HCl)
relatively safe, seldom
uses morning "hang-over".
and is well tolerated. The
adult dosage is 30 mg *h.s.*,
with elderly and debilitated
ients, limit the initial dose to
ng to preclude oversedation,
ziness or ataxia. Evaluation of
sible risks is advised before
scribing.

REFERENCES:

aracan I, Williams RL, Smith JR: The
laboratory in the investigation of sleep
sleep disturbances. Scientific exhibit at
24th annual meeting of the American
hiatric Association, Washington DC,
3-7, 1971

ost JD Jr: A system for automatically
yzing sleep. Scientific exhibit at the
annual Clinical Convention of the
merican Medical Association, Boston,
29-Dec 2, 1970; and at the 42nd annual
ntific meeting of the Aerospace Medical
ociation, Houston, Apr 26-29, 1971

ogel GW: Data on file, Medical Depart-
t, Hoffmann-La Roche Inc., Nutley NJ
ement WC: Data on file, Medical Depart-
t, Hoffmann-La Roche Inc., Nutley NJ
ata on file, Medical Department,
lmann-La Roche Inc., Nutley NJ

re prescribing Dalmane (flurazepam
), please consult complete product
rmation, a summary of which follows:

cations: Effective in all types of insomnia
acterized by difficulty in falling asleep,
uent nocturnal awakenings and/or early
ning awakening; in patients with recurring
mnia or poor sleeping habits; and in
e or chronic medical situations requiring
ful sleep. Since insomnia is often transient
intermittent, prolonged administration is
erally not necessary or recommended.

traindications: Known hypersensitivity
urazepam HCl.

Warnings: Caution patients about possible
combined effects with alcohol and other
CNS depressants. Caution against hazardous
occupations requiring complete mental alert-
ness (*e.g.*, operating machinery, driving).
Use in women who are or may become preg-
nant only when potential benefits have been
weighed against possible hazards. Not
recommended for use in persons under 15
years of age. Though physical and psycho-
logical dependence have not been reported
on recommended doses, use caution in
administering to addiction-prone individuals
or those who might increase dosage.

Precautions: In elderly and debilitated, initial
dosage should be limited to 15 mg to preclude
oversedation, dizziness and/or ataxia. If
combined with other drugs having hypnotic
or CNS-depressant effects, consider potential
additive effects. Employ usual precautions
in patients who are severely depressed, or
with latent depression or suicidal tendencies.
Periodic blood counts and liver and kidney
function tests are advised during repeated
therapy. Observe usual precautions in
presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness,
lightheadedness, staggering, ataxia and
falling have occurred, particularly in elderly

or debilitated patients. Severe sedation,
lethargy, disorientation and coma, probably
indicative of drug intolerance or overdosage,
have been reported. Also reported were
headache, heartburn, upset stomach, nausea
vomiting, diarrhea, constipation, GI pain,
nervousness, talkativeness, apprehension,
irritability, weakness, palpitations, chest
pains, body and joint pains and GU com-
plaints. There have also been rare occurrences
of sweating, flushes, difficulty in focusing,
blurred vision, burning eyes, faintness,
hypotension, shortness of breath, pruritus,
skin rash, dry mouth, bitter taste, excessive
salivation, anorexia, euphoria, depression,
slurred speech, confusion, restlessness,
hallucinations, and elevated SGOT, SGPT,
total and direct bilirubins and alkaline
phosphatase. Paradoxical reactions, *e.g.*,
excitement, stimulation and hyperactivity,
have also been reported in rare instances.

Dosage: Individualize for maximum beneficial
effect. *Adults:* 30 mg usual dosage; 15 mg
may suffice in some patients. *Elderly or
debilitated patients:* 15 mg initially until
response is determined.

Supplied: Capsules containing 15 mg or
30 mg flurazepam HCl.

Depend on highly predictable results with

Dalmane[®] (flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule *h.s.* — initial dosage for
elderly or debilitated patients.

specifically indicated for insomnia

Objectively proved in the sleep research laboratory:

- sleep with fewer nighttime awakenings
- sleep within 17 minutes, on average
- sleep for 7 to 8 hours, on average,

with a single *h.s.* dose.



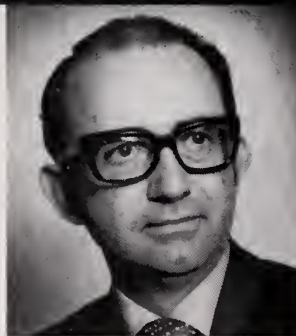
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking; but some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sitting with glazed eyes listening to a rapid lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. This information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages to a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a patient insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that frightened engendered by the insert may possibly outweigh the potential good

Opinion
&
Dialogue

n purpose of drug information
he patient is to get his coopera-
in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass infor-
mation from physicians, medical
societies, the pharmaceutical indus-
try and centers of medical learning.
The ultimate responsibility for uni-
fied labeling must, however, rest
with the Food and Drug Administra-
tion. There is nothing wrong with
the agency saying, "this informa-
tion is generally agreed upon and
before it should be used," as long
as our process for getting the infor-
mation is sound.

Distribution of the information
is a problem. In great measure it
will depend on the medication in-
dication. For example, in the case
of an injectable long-acting proges-
terone, we would think it mandatory
to issue two separate leaflets—a
short one for the patient to read be-
fore getting the first shot and a long
one to take home in order to make a
decision about continuing therapy.
In this case, the information might
be put directly on the package and
be removable at all. But for a medi-
cation like an antihistamine this
information might be issued sepa-
rately, thus giving the physician the
option of distribution. This could
serve the placebo use, etc.

It is in the distribution of pa-
tient information that the pharma-
cist may get involved. As profession-
als and members of the health-care
team and as a most important source
of drug information to patients,
pharmacists should be responsible
for keeping medical and drug rec-
ords on patients. It is also logical
that they should distribute drug in-
formation to them.

Realistic problems must be considered

We have to expect that the in-
troduction of an information device
will also create new problems. First,
how can we communicate complex
and sophisticated information to
people of widely divergent socio-
economic and ethnic groups? Sec-
ond, what will we say? And third,
how can we counteract the negative
attitude of many physicians toward
any outside influence or input? Hope-
fully the medical profession will re-
spond by anticipating the problems
and helping to solve them. Assum-
ing we can also solve the difficulty
of communicating information to di-
verse groups throughout the United
States, our remaining task will be
the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemi-
cal and such types of material
should not be included. And there is

no point in the routine listing of side
effects like nausea and vomiting
which seem to apply to practically
all drugs, unless it is common with
the drug. However, serious side ef-
fects should be listed, as should in-
formation about a medication that
is potentially risky for other reasons.

Other pertinent information
might consist of drug interactions,
the need for laboratory follow-up,
and special storage requirements.
What we want to include is informa-
tion that will help increase patient
compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the
patient would accomplish a number
of good things: the patient could be
on the lookout for possible serious
side effects; his compliance would
increase through greater under-
standing; the physician would be a
better source of information since
he would be freer to use his time
more effectively; other members of
the health-care team would benefit
through patient understanding and
cooperation; and, finally, the physi-
cian-patient relationship would prob-
ably be enhanced by the greater
understanding on the part of the pa-
tient of what the physician is doing
for him.

y the doctor can remove that fear
in 10 or 30 minutes of conversation.

I'm not suggesting that we
 withhold any information from the
patient because, first of all, it would
be totally dishonest and secondly, it
would defeat the very purpose of the
insert. I do think that a patient on the
birth control pill should know about
the incidence of phlebotrombosis.

If you're going to tell a patient
the incidence of serious adverse ef-
fects, then you have to tell him
about a concerned medical decision
made to use a particular medi-
cation in his situation after careful
consideration of the incidence of
complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, be-
cause of severe emotional problems,
should not handle the information
contained in a patient package in-
sert. Yet if we are going to have a
package insert at all, we just can't
have two inserts. I think we might
simply have to tell the families of
these patients to remove the insert
from the package.

Legal implications of the patient package insert

Just what effect would a pa-

tient package insert have on mal-
practice? We could try to avoid any
legal implications by pointing out
that the physician has selected a
particular medication because, in
his professional judgment, it is the
treatment of choice. For instance,
you can't tell everyone taking anti-
histamines not to work just because
a few patients develop extreme
drowsiness which can lead to acci-
dents. And what about the very small
incidence of aplastic anemia rarely
associated with chloramphenicol?
If, based on sensitivity studies and
other criteria, we decide to employ
this particular antibiotic, we do so
in full knowledge of this serious po-
tential side effect. It's not a simple
problem.

How do we handle an insert for medi- cation used for a placebo effect?

With rare exceptions, physi-
cians no longer use medications for
a placebo effect. This question does
raise the issue of how a patient may
react to receiving a medication
without a package insert.

Preparation of the package insert

The development of the insert
ought to be a joint operation be-
tween physicians, the pharmaceuti-
cal industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a co-
ordinator or catalyst. It is the only
organization through which the pro-
fession as a whole, irrespective of
specialty, can speak. It has relatively
instant access to all the medical ex-
pertise in this country. And it can
bring that professional expertise to-
gether to ensure a better package
insert. The A.M.A. can work in con-
junction with the industry that has
produced the product and which is
ultimately going to supply the insert.

I don't think we should rely, or
expect to rely, on legislative com-
mittees and their nonprofessional
staffs to make these decisions when
it is perfectly within the power of
the two groups to resolve the issues
in the very best American tradition—
without the government forcing us
to do it. I think the F.D.A. has to be
involved, but I'd like them to become
involved because they were asked
to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



The Pain Phone

When a telephone prescription for pain relief is necessary or convenient, you can call in your order for Empirin Compound with Codeine in 45 of the 50 states† That includes No. 4, which provides a full grain of codeine for more intense, acute pain.

† The exceptions:
Alaska, Arizona, Maine,
Oregon, Rhode Island, and
the District of Columbia.

EMPIRIN[®] COMPOUND & CODEINE

No. 4 codeine phosphate*
(64.8 mg) gr 1

No. 3 codeine phosphate*
(32.4 mg) gr ½

Each tablet also contains aspirin
gr 3½, phenacetin gr 2½,
caffeine gr ½.

* Warning—may be habit-forming.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

LEARY LABORATORY

EKG: This service is now available by appointment on house calls and at our 189 Governor St. Laboratory.

Profile 11: A new inexpensive grouping of the procedures that physicians in this area frequently order to obtain a general profile of their patients, without appointment. The fee is \$16.50 which includes the following tests:

Albumin	Alk. Phos.
Glucose	Cholesterol
BUN	Uric Acid
Calcium	Total Protein
LDH	Total Bilirubin
SGOT	Phosphate
Triglycerides	
T4	

Hemogram
(RBC, WBC, Hematocrit,
Hemoglobin, MCV, MCH, MCHC)



LEARY LABORATORY, INC.

43 Bay State Road, Boston, MA 02215

THREE PROVIDENCE LOCATIONS

655 Broad St. — 7:30-5:00 Mon.-Fri.

189 Governor St. — 9:00-5:00 Mon.-Fri.

111 Plain St. — 9:00-5:00 Mon.-Fri.

9:00-11:00 Saturday

**We have a
specialty too.**

**Office
interiors.**



ROITMAN & SON, INC.

Fine Furniture and Accessories

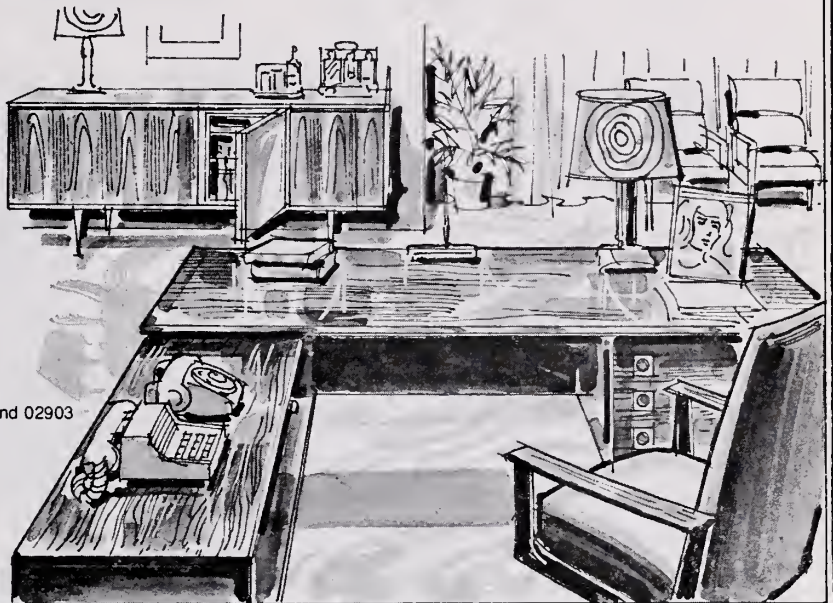
161 South Main Street, Providence, Rhode Island 02903
Telephone (401) 861-6010

Open Monday and Thursday evenings until 9.
Convenient terms • Free parking
Delivery arranged beyond local area.

We plan and furnish professional offices of any size, from the carpet up. Our professional interior designers work with you or with your architect.

Our people are not only highly talented, they are experienced.

Furnishing your office can be one thing you don't have to worry about. Just call us. 861-6010.



ORDER OUT OF CHAOS

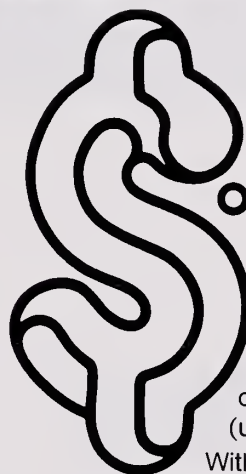
I CAN HELP YOU SYSTEMATIZE YOUR
ROUTINE, PAPER WORK, BILLING, DESK, FILES,
HOUSEKEEPING, CLOSETS, ANYTHING AT ALL.

M: A. LAURANS

Methodical Procedures Consultant

482 Lloyd Ave., Providence, R.I. 02906

401-521-4677 — 401-861-9178



**Collect 50%
on past due
accounts**

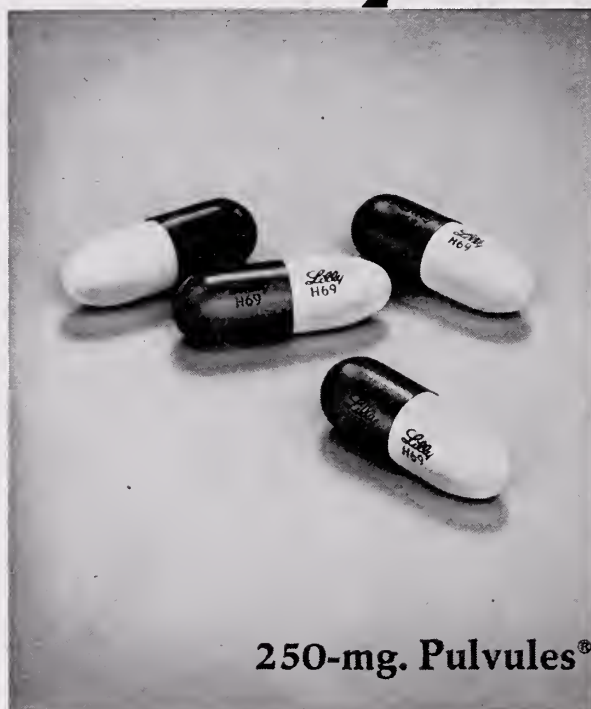
Improve your cash
flow by receiving 50%
on those "impossible"
outstanding accounts
(up to 6 years old).

With our plan you don't make
phone calls or send out letters, we do it all. All
you do is wait for the money to start coming in.
Easy? You bet. And good for business, too.
Call us today and start collecting on those
outstanding accounts.



Union Trust Building
170 Westminster Street
Providence, R.I. 02903
Phone (401) 421-0700

easy to take



Keflex®
cephalexin



500738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

I. Brown University Alcoholism Conference: Introduction

Brown University Medical Program Anticipates A Highly Visible Place In Its Curriculum For Study Of Alcohol

By Levi C. Adams and Stanley M. Aronson, M.D.

Of all aspects of health and disease which do not now find an established place in the traditional medical school curriculum none is more important or more neglected than the problem of alcoholism.

This conference was convened because Brown University is determined to create a highly visible place in its evolving medical curriculum for a comprehensive study of alcohol use and abuse, a program which we feel must be included both in undergraduate and graduate education. A current working thesis is to establish a professorship which would include among its responsibilities the assurance that sufficient teaching in alcoholism is provided in all those disciplines within the medical education program where it is appropriate.

The University's immediate problem was to gain a broad definition of the sort of teaching which would be both desirable and feasible, to develop a keener appreciation of any inherent difficulties in the proposed concept, to learn of possible alternatives as presented by professionals already experienced in this area, and to gain a candid appraisal of the human resources which should be invoked in order to implement such a program.

LEVI C. ADAMS, *Assistant Vice President, Biology and Medicine, Brown University.*

STANLEY M. ARONSON, M.D., *Dean of Medical Affairs, Brown University.*

Read at Conference on Teaching of Alcoholism in United States Medical Schools, sponsored by Brown University Program in Medicine, January 31 and February 1, 1975, Providence, Rhode Island.

ANSWERS SOUGHT

Specifically, the University sought to obtain answers to these questions:

- (1) Why is alcoholism essentially ignored as a subject for medical education?
- (2) Can alcoholism be taught effectively at a student level, or must such teaching be delayed until residency training?
- (3) Should the teaching of alcoholism be conducted separately, or should it be included as part of an overall study of drug dependence?
- (4) Should one discipline retain basic responsibility for teaching in alcoholism — medicine, psychiatry, pharmacology, community health — or should it be taught by an interdisciplinary team?
- (5) How can the medical student best be taught to understand the effect of alcoholism on human lives?
- (6) Which other professional disciplines and professional activities might contribute most to the medical student's understanding of the problem of alcoholism?
- (7) Can a comprehensive teaching program on alcoholism be conducted successfully within a psychiatric teaching facility?
- (8) What resources within the non-medical faculty of this University might be used effectively as part of an alcoholism teaching program?
- (9) Which graduate training programs in medicine should include more consideration of the problems of alcoholism?

(Continued on next page)

- (10) Why do most medical school graduates feel uncomfortable in dealing with alcoholism?
- (11) Would the ombudsman concept be feasible?
- (12) If there were an ombudsman with portfolio from the Dean, what measures could be taken to insure that the subject of alcoholism would be covered adequately in medicine, surgery, pathology, or other disciplines?
- (13) Should such an ombudsman also have major responsibilities in relevant clinical services?
- (14) If the ombudsman also directs a clinical service, will he (she) still be able to provide proper monitoring of teaching of alcoholism throughout the medical school?
- (15) What rank should the ombudsman hold, and what credentials should be required to command the respect of colleagues in the program?
- (16) In a community-based medical school such as the one at Brown University what hospital privileges must the ombudsman have in secondary locations, if he is based primarily at one hospital?
- (17) Would an already distinguished professor be willing to accept a chair in alcoholism, or would he feel that it might lessen his standing in his classically defined specialty?
- (18) How important is a parallel research effort in the development of an academic program in alcoholism?
- (19) Should independent student research projects in alcoholism be sponsored by the University?
- (20) If so, would such projects be concentrated more properly within the basic medical sciences or in social sciences related to health-care delivery?
- (21) If non-M.D. alcoholism counsellors are significantly involved in the teaching of medical students, should they be recognized as regular faculty?
- (22) To support a comprehensive teaching program in alcoholism, should there be an in-service education program for existing faculty? If so, how should such a program be structured?
- (23) What criteria can be used to evaluate the effectiveness of teaching in alcoholism?
- (24) What role should the medical school administration play in the development and implementation of an effective program in the teaching of alcoholism?
- (25) What financial resources would be required to

provide continuing support to a program in alcoholism?

- (26) Would an endowed chair in alcoholism lend validity and dignity to the subject?

CURRICULUM GOALS

The medical curriculum currently governing medical education at Brown University was designed by a faculty-student committee which had been convened in June 1972 to devise a course of study acceptable both to the faculty at Brown University and to the accrediting bodies of the extramural Liaison Committee on Medical Education. The curricular format proposed by this committee was accepted by the Liaison Committee (August 1972) and by the Biomedical faculty at Brown (December 1972), and was implemented in January 1973.

The curriculum for the Program in Medicine has a number of characteristics which make it more likely to accept change and permit the introduction of nonorthodox subjects, such as alcoholism, into its structure.

The curricular design is not held to be sacred; change can occur. Indeed, in the view of both students and faculty, change must be permitted to occur with reasonable facility. Recommendation for any modification can be initiated by students, faculty, or administration either as members of the committee or through means of petition to the M.D. Curriculum Committee. This flexibility makes it easier to identify need and to translate this need into a teaching reality.

The curriculum provides generously for elective time, participation in non-medical disciplines, the bridging of traditional disciplinary lines, and effective counselling.

We have recently become aware of how lacking our curriculum is in the study of alcoholism. Concurrently with this conference on the Teaching of Alcoholism in United States Medical Schools, we have taken initial steps to rectify this deficit. A committee, chaired by Doctor Roswell Johnson and with representatives from numerous specialties in medicine, has begun to accomplish this task. Teaching time has now been obtained from courses in the neurosciences and the clerkship in community health in order to introduce interdisciplinary seminars in the societal, behavioral, and pathophysiologic aspects of alcoholism.

We look to this conference of skilled and competent authorities to provide us with those insights and guidelines necessary to achieve our educational purposes.



II. Keynote Address: How Future Physicians Must See The Alcoholic

Alcoholism Is Essentially A Medical Rather Than A Moral Problem

By Malcolm C. Todd, M.D., F.A.C.S.

Every era had its "fashionable" problems, problems which get most of our attention because they have the charisma of novelty. We are here to consider, from the standpoint of medical education, a problem which is rather *unfashionable*. Alcoholism has been familiar for so long and is so interlaced with our social and commercial culture, that many people are tired of hearing about it and even take it for granted. Certainly, it evokes less fascination and horror than heroin or cocaine or mescaline. Yet, alcohol is a drug just like those, and it is America's greatest drug problem in terms of the numbers of people addicted to it and damaged by it. An estimated 9,000,000 alcoholics walk our streets, work in our offices and factories, teach in our schools, and exist in our custodial institutions. That figure is the equivalent of the combined 1970 populations of New York City and Houston, Texas. And, since American families average four persons, we can assume that alcoholism affects 36,000,000 of us.

INCIDENCE OF ALCOHOL ADDICTION

The incidence of alcohol addiction is likely to increase for at least two reasons: (1) More and more teenagers are drinking. Alcohol is their number one drug — largely because it is relatively

MALCOLM C. TODD, M.D., F.A.C.S., *Immediate Past President, American Medical Association.*

Read at Conference on Teaching of Alcoholism in United States Medical Schools, sponsored by Brown University Program in Medicine, January 31 and February 1, 1975, Providence, Rhode Island.

cheap, available, and lawful. The upsurge is shown in a study released last summer by the National Institute on Alcohol Abuse and Alcoholism. Of 10,000 junior and senior high school students who were subjects of the study, 92 per cent had used alcohol at least once — almost three times the number who had used marijuana. And 23 per cent of those students got drunk often enough to be regarded as potential problem drinkers. (2) Another reason for a possible imminent rise in the rate of alcoholism is the economic recession. In hard times, when all else seems to fail, many people turn to alcohol as an escape. But, while the economy can affect alcoholism in hard times, alcoholism affects the economy in times good and bad. It diminishes the productive capacity of this nation to a degree that could be even more damaging in the future, when our economic health will depend less on our natural resources and more on our productivity. Major industrial firms have estimated that the alcoholic employee loses approximately 22 more working days per year than the non-alcoholic employee and has a life expectancy some 12 years shorter. Chiefly because of lost work, accidents, and medical expenses, alcoholism costs this nation more than \$25 billion a year. In every segment of our national life it takes its toll.

At least 100,000 deaths a year are alcohol-related. Alcohol plays a significant role in one-half of the homicides in this country and in one-third of the suicides. It is directly at fault in a majority

(Continued on next page)

of the drownings, deaths from fire, and accidental falls. Half the felons in federal prisons have alcohol-related problems. Obviously any efforts to relieve some of our country's worst social ills cannot be comprehensive or thorough unless they take alcoholism into account, and any efforts to relieve the alcoholism problem must look primarily to medicine.

A MEDICAL PROBLEM

The realization that alcoholism is essentially a medical problem rather than a moral violation or a crime has not come quickly or easily. But now it is taking hold. It is reflected in the pioneering federal legislation which provides for alcoholism research and therapy. It is reflected in the uniform laws adopted by two-fifths of the states, providing that persons who are drunk in public be sent to a treatment facility rather than to jail. The medical focus of alcoholism is being recognized more and more by its victims and those close to them. In 1972 these victims accounted for more than 3,000,000 visits to private practitioners. Increases in the incidence and effects of alcoholism and in the realization of its medical nature mean that its challenge to physicians will also grow. But that challenge does not stop with the physician. It extends to the schools which are training the coming generation of physicians.

How well are these schools responding? A survey reported last February (1974) that the response had been meager, despite a federally funded effort to make substance dependence a recognized part of medical school curricula. Fewer than 20 schools were offering an elective in the abuse of alcohol, of other drugs, or of both. Fewer than five required course work in substance dependence. One may only speculate on the reasons for this apparent indifference. Perhaps it reflects a lingering prejudice against alcoholics and other addicts as moral weaklings. Perhaps dependence and its treatment are too elusive a subject for the structures of a medical curriculum.

But physicians — now and in the future — *must* be familiar with alcoholism and other forms of addiction. They *must* be familiar with those conditions if they are to practice the philosophy that the patient should be seen as a "whole man" and not merely as a medical diagram. They *must* have the familiarity if they are to see the patient, his family, and society interrelatedly, as they should. They *must* have the knowledge as the various states increasingly send public drunks to treatment facilities rather than jail (for, particularly in small

towns and rural areas, those facilities may be nothing more than a doctor's office). And there *must* be that knowledge if health insurance and prepayment plans are to cover the treatment of alcoholism, as the AMA urges. In view of all these challenges it is heart-warming that this conference is dedicated to looking squarely and incisively at the need for medical education in alcoholism, and that you want to do your best to meet that need. Alcoholism as a topic of medical education should be seen on two levels: it is a sickness in itself, and it contributes to other forms of sickness.

DEFINITION OF ALCOHOLISM

The AMA adopted a statement in 1971 identifying alcoholism as "a complex disease with biological, psychological, and sociological components." The statement uses the word "disease" as the Medical Dictionary defines it: "a definite morbid process having a characteristic train of symptoms." Accordingly, alcoholism deserves special attention in the curriculum, either separately or as part of an overall instruction in drug dependence. The student must not get the idea, however, that alcoholism treatment is so specialized that it would prevent him from treating anything else. On the contrary, the student should see that it has a bearing on many other sicknesses and on every branch of medicine. An explanation of its effects should be woven into different parts of the undergraduate medical curriculum, wherever it is appropriate.

Much has been said about alcoholic effects that are of concern to the psychiatrist, who handles 29 per cent of alcoholic patient's visits; to the internist, who handles 25 per cent; to the cardiologist, neurologist, and dermatologist, as well as to the general practitioner, who handle 37 per cent of the visits. But alcoholism also poses special considerations and problems in surgery and for the anesthesiologist. In a badly intoxicated patient the diagnosis of an acute surgical illness can be extremely difficult because his physical symptoms and pain may be blunted or misinterpreted, and because he may be unable to give a reliable medical history. Delirium tremens, with a death rate that runs as high as 10 per cent, frequently seizes an alcoholic after an operation of any kind. Pulmonary complications also are common. Alcoholics may develop progressive liver dysfunction and failure after surgery. Their wounds may heal poorly, particularly if they have an advanced liver disease accompanied by malnutrition and vitamin deficiencies. Acutely intoxicated patients requiring emergency surgery

(Continued on page 401)

III. On Undergraduate Education: Alcoholism Education In A Medical School

University Of Maryland Program Provides A Model For Curriculum Development

By Willem G. A. Bosma, M.D.

In the last two decades strides have been made in recognizing alcoholism as a massive health problem. Alcoholism has been declared a disease; states have allocated funds to set up treatment facilities. But there has been little actual change. Members of the helping professions still are often reluctant — or unable — to respond to the alcoholic. In the history of almost every alcoholic, even today, are accounts of periodic searches for help, of desperate appeals to physicians, hospitals, clergymen, teachers, and others — and of meeting with confusion, rejection, and ignorance. In the meantime alcoholism and alcohol-related problems have increased in our society. There are two major challenges to the people concerned with alcoholism today: education, which encompasses not only enlightening the public about the alcoholic, but also training professionals and paraprofessionals in diagnosing and treating the alcoholic; and the setting up of adequate comprehensive treatment facilities.

PREMISES

The educational program at the University of Maryland Medical School developed from these premises:

WILLEM G. A. BOSMA, M.D., *Director, Division on Alcoholism and Drug Abuse, University of Maryland Hospital.*

Read at Conference on Teaching of Alcoholism in United States Medical Schools, sponsored by Brown University Program in Medicine, January 31 and February 1, 1975, Providence, Rhode Island.

- 1.) That adequate education for professionals can be achieved only if adequate clinical services and supervision are available;
- 2.) That the role of the physician in the treatment of alcoholism must be clearly defined and taught;
- 3.) That interaction with other professionals and paraprofessionals who comprise the treatment team must be clearly defined, because of the psychosocial and physical complexities of alcoholism; and
- 4.) That alcoholism is a disease entity which must be integrated within the general basic curriculum of the medical school, as is any disease of such disastrous proportions.

UNIVERSITY OF MARYLAND PROGRAM

In our University Hospital all major in-patient services have an assigned alcoholism counsellor. In addition there are various groups, open and closed, available. These groups are conducted by the counsellors; the hospital chaplain; residents in psychiatry, neurology, and medicine; and the director of alcoholism services. Alcoholics Anonymous (AA) group meetings and a meeting for relatives also are held. These services are carried out by a physician director, who also is responsible for the drug abuse and educational programs, a nurse coordinator, a full-time nurse for two "quarter-way" houses, and 30 counsellors. At the center of the treatment program are the paraprofessionals, the alcoholism counsellors. A significant number of these counsellors are

(Continued on next page)

reforming alcoholics; their level of education and social background is quite disparate. Since counsellors are trained in all areas of alcoholism treatment — from taking case and family histories to basic counselling skills — they are the backbone of the treatment programs. The professionals involved in the alcoholism services of the University Hospital act mainly as consultants and teachers. An adequate and comprehensive alcoholism treatment program is the foundation for a realistic educational and training program in a teaching hospital. Since this is a new and complex field, conventional educational models are incomplete or irrelevant. On-the-job training often is worth many lectures or discussions.

Because of the interest of the staff of the Institute of Psychiatry and Human Behavior of the University, an interdisciplinary program in alcoholism was initiated in 1970. This program encompasses the Schools of Medicine, Social Work, Nursing, Pharmacy, Law, and Dentistry. To come to terms with one of the major medical and social problems in the country, the cooperation of professionals in every field was mandatory. The first effort was to introduce facts about alcoholism through conventional lectures in all the participating schools. The size of the enrollment made this impractical, and each school now is handled separately. At the same time, the schools were encouraged to introduce alcoholism into their own curricula, as seen from their respective viewpoints.

CHANGING ATTITUDES

The alcoholism services provided by the hospital are chiefly responsible for the changing attitudes toward alcoholism education in some of the schools. Alcoholism personnel have been slowly accepted as members of treatment teams, and their advice is sought more and more frequently. They stimulated interest to such a degree that in-service training was requested. In one year twelve different courses were conducted with students, and included nurses and the campus police. This program led to occasional disputes with the attending physicians. As a result, grand rounds on alcoholism were conducted at the request of the chief resident physicians. When alcoholism services in the Emergency Room were threatened, medical students in this service appealed to the dean. Still another indication of a change in attitude is shown by the more frequent primary or secondary diagnosis of alcoholism in the hospital.

Apart from basic lectures which give some facts

and attempt to stimulate interest, the curriculum consists of seminars, along with field experience or clinical experience. Since the hospital's services cannot absorb such large numbers of students, many go outside to clinics, alcoholism services in the health departments, and state hospitals. Seventeen courses on alcoholism were offered last year. At the very beginning we discovered that it was impossible to separate alcoholism from the overall field of addictions and drug abuse. The students found it logical and imperative that the whole realm of addictions be covered in the seminars. The high incidence of drug abuse among the children of alcoholics was an issue, as were the mixed addictions, with alcohol as one of the addictive substances.* For every two seminar hours at least four hours of field placement and one hour of supervision are required. Many students spend much more time at their assignments, working with alcoholism counsellors. From the beginning the intent was that students learn most from counsellors and from the patients themselves. Seminars were to be discussions to help the students place their experiences in perspective, provide some structure, and help them overcome difficulties in their interactions with patients, agencies, and fellow workers.

INTERDISCIPLINARY PROGRAM

The interdisciplinary program affirmed the complexity of the problems associated with alcoholism — but it also proved that all professionals can work together fruitfully. Initially different approaches and attitudes of the various professions were resolved. At first, for instance, the social workers were hesitant and passive in attitude — contrary to that of medical and nursing students. Attitudes toward, and methods of working with, the alcoholic and drug abuser changed markedly under the group influence. Students in this program will have no difficulty in knowing the areas in which other professionals are most helpful, nor will they be hesitant to seek out other professionals for help.

All group therapy sessions at University Hospital permit visitors and observers. Because of the interest of students from the University and attendance by alcoholism professionals from outside, an educational meeting is held after each group therapy session. Generally, the meeting is attended

*A detailed course outline may be obtained from: The Office of External Affairs, Biology and Medicine, Box G, Brown University, Providence, Rhode Island 02912.

(Continued on page 403)

IV. On Graduate Education: Alcoholism Instruction In Graduate Medical Education

Appropriate House Staff Exposure Is Important In Developing A Positive Attitude Toward Alcoholism

By Kenneth H. Williams, M.D.

Alcoholism Instruction in Graduate Medical Education is a subject very close to me because all of my own positive education in alcoholism came *after* graduation from medical school. This is not to say that I was not taught about alcoholism in my undergraduate education, for I was. In fact, the first patient I ever examined (as a sophomore medical student in my Physical Diagnosis class) was an alcoholic. In fact, at least 20 per cent of the patients with whom I had clinical contact during my undergraduate medical training were alcoholics. But with all of these patients, as with the first one, one never talked about the alcoholism. One talked about the *other* problems, which might include medical complications of alcoholism or unrelated medical problems, but alcoholism was never mentioned aloud in the presence of the patient. I was taught in my undergraduate psychiatry class that alcoholism was not a disease, merely the symptom of an underlying problem. I was never taught how to recognize alcoholism, let alone what to do about it. As a student, one quickly becomes aware of the negative and pessimistic attitudes of the treatment personnel. I had a difficult time discussing a patient's drinking with him. It was easier, as a medical intern and resident, to do as I had been taught: to ignore the alcoholism and attend to the medical complications.

KENNETH H. WILLIAMS, M.D., *Assistant Professor of Psychiatry and Medicine, University of Pittsburgh.*

Read at Conference on Teaching of Alcoholism in United States Medical Schools, sponsored by Brown University Program in Medicine, January 31 and February 1, 1975, Providence, Rhode Island.

My real education in alcoholism began at an Alcoholics Anonymous meeting when I was a second-year medical resident. For the first time I met a well, recovering alcoholic—in fact, an entire roomful. I began to realize that all my previous experience in a hospital setting has been with alcoholics who were sick and not making it. I met a Ph.D., a lawyer, and a nurse that night, and my attitude began to change. I went to more Alcoholics Anonymous meetings and began to read about alcoholism.

A few months later I received permission to put on a medical grand rounds on alcoholism. My interest in alcoholism was encouraged by meeting with other physicians who treated alcoholics, and I had the experience of watching the process of recovery in alcoholism. It was one of the most amazing things I had ever been part of. I saw for myself that changed family attitudes could play an important role in the recovery process.

My education in alcoholism is continuing, with the assistance of the National Institute for Alcohol Abuse and Alcoholism (NIAAA) and National Institute for Drug Abuse (NIDA) Career Teacher Award. I have had opportunity to visit outstanding treatment facilities and share experiences with leaders in the field.

TEACHING AT HOUSE STAFF LEVEL

My experience as an educator in graduate medical education at the house-staff level has been gained at two locations. At Yale-New Haven Hospital I participated in the development of a four-part program which included an in-patient rehabilitation unit, an emergency room project, Alcoholics Anonymous meetings, and alcoholism consultation.

(Continued on next page)

Whenever they were asked for assistance, a multidisciplinary team helped the house-staff in managing an alcoholic patient. Some requests were for assistance in managing acute withdrawal; sometimes we worked with the patient's denial or to effect a disposition which had some chance of helping the patient's recovery. As often as possible, we tried to keep the patient in treatment, either at a state-sponsored alcoholism clinic or at a half-way house.

We had difficulty referring patients from the hospital to a clinic, although we introduced the patient to his counsellor and set a specific time and date for the post-hospital visit. In one year I saw more than 100 patients; fewer than 10 per cent showed up for their first visit at the state clinic. Subsequently I started my own out-patient clinic at the hospital, and I found that more than half of the in-patients referred kept their first appointment.

The most successful part of the program at Yale was the AA meetings. Here is, at the same time, the most effective treatment resource for the patient and an effective educational experience for the many house staff members and other students who visited the meeting. During my four years at Yale, several hundred in-patients were exposed to the AA experience and many found sobriety. Whenever possible we attempted to have recovering alcoholic patients return to visit the staff in the hospital who had cared for them.

My experience at the University of Pittsburgh School of Medicine, has been different in several respects. My activities have been primarily with psychiatric residents in a psychiatric facility. For, while my faculty appointment at the University is in both internal medicine and psychiatry, my office and primary appointment is with the Department of Psychiatry. I began, as I had in New Haven, by working with AA. We managed to get a regular weekly meeting started in the psychiatric hospital. After presenting an educational conference to the entire staff, I held seminars series on alcoholism to which I invited the psychiatric residents. The only time available was Saturday morning, and I was advised not to be surprised if no one came — but over half of them did.

The psychiatric house staff consisted of interns and first, second, and third year residents. They came from various medical centers. I suspected that their level of understanding of alcoholism would vary greatly: so

in the initial session I gave a quiz asking basic questions about alcoholism and its treatment, how many alcoholic patients they had seen in the last month, and what they wished to be covered in the remainder of the seminar. The results of the survey showed a consistently low level of understanding about alcoholism and its treatment. The house staff stated that they considered alcoholism to be of "less than average" importance in the field of psychiatry; only four of the residents were able to give an acceptable definition of alcoholism; less than half gave an adequate definition of "addiction" or "tolerance."

EDUCATIONAL PROGRAM

Using these results I designed an educational program around those aspects in which there seemed to be the greatest lack of knowledge and those in which they had expressed the most interest. In seminars and readings we covered etiology, natural history of the disease, methods of diagnosis, and alcohol as a drug. We spent one session on practical treatment of the alcoholic by the psychiatrist, emphasizing utilization of AA and Antabuse.[®]

I was told later that some had come to the seminars initially out of curiosity, but attendance and interest grew. By the last seminar we had a moderately interested group, anxious to discuss practical patient management problems. Three of the 17 participants have requested that they spend their elective or research time with the alcoholism program.

Although I now provide three hours of introductory material on alcoholism to new residents, most of my subsequent educational experiences with the psychiatric staff have attempted to focus on clinical work with patients. In providing consultation to the hospital I have watched the number of patients diagnosed as alcoholic increase until they now comprise between 10 to 20 per cent of all in-patients (I they were there all the time, but were not diagnosed as alcoholics). Requests for assistance in clinical management of hospitalized alcoholics have far outstripped my ability to respond, and I have begun to hire additional clinical staff. All residents now spend one morning a week in the program for four months. In this period I attempt to put them in clinical contact with alcoholics and to have them follow at least one patient's progress over the four-month period. They are involved in family conferences and group sessions. We have made visits to several of the alcoholism treatment facilities

in the community, and each resident attends at least two AA meetings. They learn to use Antabuse® and *not* to prescribe minor tranquilizers routinely on an out-patient basis. Above all each resident can watch an alcoholic patient recover and feel that he has been part of that recovery process.

PATIENT CARE APPRAISAL

Coming to a new medical center — and not knowing the level of medical care afforded alcoholic patients — my initial approach was to evaluate current practice at the General Teaching hospital in regard to alcoholism. The medical records of 100 patients, all diagnosed as alcoholics, were evaluated to determine whether the care reflected in the record fulfilled each of 45 patient-management criteria thought to be important in general hospital care of the alcoholic patient.*

None of the records reviewed met all 45 indicators for good patient management; only 5 per cent met the 10 criteria designated as "more important." The records were least adequate in respect to history, only 1 per cent fulfilling all historical criteria. Less than 25 per cent of the records contained a positive or negative history of the use of other sedative drugs; less than one-third recorded the duration of the most recent drinking episode.

In more than half the cases there was no record of patient counselling or education in alcoholism, one of the "more important" criteria. In 30 per cent of the charts physical restraints were used in treating the alcoholic withdrawal syndrome. Only a little more than half of the alcoholics had had a tuberculin skin test, and one-third of the records had no indication of liver size as a result of a physical examination. It *was* reassuring that 90 per cent of the patients evaluated had been discharged with all sedative or hypnotic drugs discontinued.

The discharge criteria were met in 65 per cent of the cases examined, but the disposition of patients at discharge suggested that the needs of the alcoholic patient after discharge were not being met. The majority of hospitalized alcoholics were discharged to out-patient medical clinics for follow up care, but interviews with the director of the out-patient clinics and the social service department in-

dicated that the clinics were concerned almost exclusively with medical problems, rather than alcoholism: I estimate that more than 90 per cent of the alcoholic in-patients at our university hospital were discharged without follow up for their major problem, alcoholism.

In general, historical and physical examination records were more complete when the patient was cared for by the house staff team rather than by a private physician. Care for the alcoholic patient seemed better on the medical than the surgical divisions.

Our study also revealed a major problem in recognizing or diagnosing the alcoholic: of all patients admitted to our university general hospital, fewer than 2 per cent are given a final discharge diagnosis which includes alcoholism. From previous studies we would have expected the incidence of alcoholism to be between 13 and 40 per cent. In an additional review of 50 charts of patients not diagnosed as alcoholic but with various types of liver disease, the medical history strongly suggested a diagnosis of alcoholism in more than 25 per cent.

ALCOHOLISM AS A PROBLEM

Evaluation of patient-care management of the hospitalized alcoholic at our hospital showed that medical care for the *consequences* of alcoholism was generally good, but that care for the *problem* of alcoholism was unsatisfactory. Inadequate alcohol histories, failure to counsel the alcoholic, inability to identify the alcoholic, and failure to provide adequate follow up care for alcoholism — these appeared to be the major shortcomings.

I plan to establish a multidisciplinary committee of health professionals interested in alcoholism. Shortly we shall initiate Alcoholics Anonymous meetings at the general hospital, and I shall be working with the hospital administration to hire alcoholism counsellors to work on the patient-care divisions. I have been asked to present medical grand rounds at two of the general hospitals within the medical center, and I shall attempt to outline specifically how to recognize the alcoholic patient and what the physician should do after identifying the problem. The educational program with the house staff will emphasize the deficiencies noted in our study.

In my talks to practicing physicians I discuss alcoholism as a disease, review pharmacological aspects of alcohol as a drug, and cover practical suggestions in patient management.* Whenever pos-

*A copy of: "Alcoholism: Guidelines for Patient Care Appraisal" May be obtained from: Office of External Affairs, Biology and Medicine, Box G, Brown University, Providence, Rhode Island 02912.

*See Appendix (p.): "Ten Suggestions for Office Management of the Alcoholic Patient."

(Continued on page 404)

V. Brown University Alcoholism Conference: A Summary Of The Discussions

Clear Objectives Are Acceptance Of Personal Responsibility By Physicians And Incorporation Of A Respectable Research Component

By Pierre M. Galletti, M.D., Ph.D.

Following each formal presentation, time was allotted for questions and general discussion. As might be expected, the questions were plentiful and the ensuing discussion was spirited. Certainly, this conference — with the nation's leading advocates of education in alcoholism as participants — proved that there still is no established "dogma" in teaching and training in alcoholism as part of a medical school education.

The questions posed in the INTRODUCTION are generally representative of the questions restated by the participants; the answers, included in this summary of the discussions, reflect the group's consensus. We recognize at this time that there are no truly definitive answers, but we are encouraged by the obviously sincere desire of all participants to push forward toward an educational program which will help solve one of the nation's most widespread medical problems.

With the general acceptance among American medical schools of a multidisciplinary organ-oriented presentation of physiopathology, time — and the desire — for the recognition of topics which do

not find a comfortable habitat among the organ-oriented courses, have become increasingly difficult to find. Among such topics alcoholism must be granted a major position.

For all its advantages today's widely accepted approach to the medical school curriculum still tends to direct students toward specialty training. As a group, participants in this conference seemed acutely aware of the need to achieve curricular acceptance for alcoholism. A significant portion of both formal presentations and informal discussions was devoted to a search for the most effective approach toward achieving a coherent program within the present structure of medical education in the United States.

STYLE

Some medical schools take a very formal approach, with compulsory lectures and even a course manual. Other schools rely on the elective approach to arouse interest in alcoholism. The jargon of guerilla warfare is frequently used to describe the "infiltration" of the curriculum.

Some participants emphasized the need for knowledgeable and dedicated faculty to serve as "role models"; others pointed out that the program would not succeed unless the medical school administration is openly and firmly committed to it.

There was consensus that the teaching of alcoholism could not be relegated to psychiatry alone,

PIERRE M. GALLETTI, M.D., *Vice President, Biology and Medicine, Brown University, Providence, Rhode Island.*

Read at Conference on Teaching of Alcoholism in United States Medical Schools, sponsored by Brown University Program in Medicine, January 31 and February 1, 1975, Providence, Rhode Island.

but that it must be made a realistic part of other disciplines within the curriculum.

Finally, there was a clear insistence by the conference participants that a successful program on alcoholism must achieve scholarly credibility among faculty as well as students.

THE LEVEL OF EDUCATION AT WHICH A PROGRAM SHOULD BE FOCUSED

To be effective, a program on alcoholism must be organized longitudinally throughout the continuum of undergraduate and graduate medical study. Brown University, it was pointed out, has a rare opportunity to accomplish this since two-thirds of its medical students attend the University immediately from high school and can, therefore, relate to the medical faculty from their first year in college. This college-medical school relationship, which Brown shares with only a few other universities, provides an unusual opportunity to blend the social perspective with the scientific before the student becomes so emotionally involved in "learning medicine" that broader considerations of public health seem, for a time, less relevant.

The suggestion was made that summer fellowships be made available to beginning medical students, even before they have taken a course in physical diagnosis, to capitalize on their early interest and dedication. Clearly, a program on alcoholism must address itself to the residents and fellows in a teaching hospital. Warnings were received, however, that a focus on residents might too easily become a "cop out," neglecting the education and participation of the general faculty and attending staff who, ultimately, are responsible for the tenor, the philosophy, and the orientation of care in a teaching hospital.

Great importance was placed on the involvement of non-M.D. hospital personnel in the program — particularly women, since they seem to have a more natural non-judgmental attitude toward the alcoholic patient. Participants stressed the value of enlisting the aid of persons who are involved with alcoholism treatment or rehabilitation *outside* of the formal hospital framework. Contacts with Alcoholics Anonymous and similar organizations, therefore, should prove valuable in formulating a curriculum.

EMPHASIS

Participants agreed that an alcoholism program to be educationally successful must offer a useful skill within the hospital setting; this will do more to convince faculty and attending physicians of its value than any series of lectures and seminars. Yet, there certainly must be more to any medical school

activity than simply providing something "useful." To have a lasting effect on the student — and, thus, on the advancement of medicine itself — education on alcohol addiction and the treatment of alcoholism must also include a scholarly component which will attract and retain the students' interest and encourage them toward constructively critical thinking. In this field — as in all others — there are orthodoxies which must be challenged, and experience suggests that there is no view more difficult to eradicate than a conservative dogma on a liberal issue.

CONCLUSION

Brown University is grateful to the conference participants for offering their wisdom and experience to our new medical school. The faculty will reflect on all suggestions and opinions presented during the conference and will now move more confidently and positively in consideration of the particular requirements and aims of this University.

Two objectives already are clear:

- 1.) In the short term — to develop an educational program which will encourage each physician to accept some *personal* responsibility in the treatment of the alcoholic.
- 2.) In the long term — to extend the alcoholism program to incorporate a respectable research component, increasing our understanding of the causes and mechanisms of alcoholism and enhancing the quality of future therapy.

APPENDIX

Ten Suggestions for Office Management of the Alcoholic Patient

- 1.) Maintain a non-judgmental, objective attitude.
- 2.) Complete a thorough evaluation by history and physical examination to establish the diagnosis, and plan treatment; look for disease complications.
- 3.) Consider hospitalization to break the addictive cycle and to treat progressive medical complications.
- 4.) Inform the patient of your findings.
- 5.) Utilize Alcoholics Anonymous (AA).
- 6.) Involve the family — utilize Al-Anon and Alateen.
- 7.) Consider prescribing disulfiram (Antabuse®).
 - (1.) not until 24 hours after last alcohol ingestion.
 - (2.) only with patient's (and family's) knowledge and consent.

(Continued on page 405)

Editorials

ALCOHOLISM IN RHODE ISLAND

This issue of the JOURNAL is devoted to a series of papers on "Teaching of Alcoholism in United States Medical Schools" delivered at a symposium sponsored by the Brown University Program in Medicine. The purpose of the conference was to define not only the role of medical schools in general in confronting this national epidemic, but more specifically that of Brown University during the formative years of its Medical Program. There appears to be an inviting opportunity at Brown to seek new approaches unhampered by long established departmental rigidities. What is the existing situation in Rhode Island which will provide a milieu for this venture?

Although Rhode Island is small, its incidence of alcoholism is large. According to several accounts it ranks third in the nation in the incidence of alcoholism, with only Nevada and California ranking higher. At least one of every 17 Rhode Islanders is an alcoholic. Despite this high incidence there is not a single detoxification center within the city of Providence. The general hospitals usually refuse to accept alcoholics for treatment of their alcoholism, but rather refer such cases to the State Institute of Mental Health at the Rhode Island Medical Center. Most detoxification in the state is being done there. The Center has both inpatient and outpatient clinics operated by the State Division of Alcoholism. There are no private facilities for detoxification in the whole of Rhode Island. The federal programs in the state are directed to prevention and the occupational aspects. There are several alcoholism programs listed with the Council for Community Services, such as that at the Cranston Health Center, Halfway House in Pawtucket, and the Hope Council on Alcoholism and Talbot House in Providence. The mental health centers in Newport and Woonsocket have been interested in developing treatment programs, as has Butler Hospital in Providence. Butler Hospital is currently seeking one million dollars in federal aid to establish an alcoholic treatment program. Ac-

cording to press reports Kent County Memorial Hospital has also expressed interest in becoming involved with the problem. There are currently some 61 active Alcoholics Anonymous groups in Rhode Island.

This listing, which may well not be complete, gives a picture of somewhat scattered, if not sketchy, resources for this very large problem. The state's insistence that Butler's program be coordinated with other statewide programs, and Providence Mayor Vincent A. Cianci's request for a state grant to develop a comprehensive network of alcoholic treatment facilities in Providence both emphasize the need for better coordination as well as greater resources.

A recent editorial in JAMA on the subject of "Susceptibility to Dependence on Alcohol" outlines the three principal theories of chemical dependence. The first, Psychological, proposes that there is an addictive personality. The second, Genetic-Biochemical, postulates an inborn biochemical propensity. The third, Dose-Time Relationships, hypothesizes that everyone is susceptible to physical dependence if he or she takes large enough quantities for a sufficiently long period of time. The editorial suggests that all three theories may apply in certain individuals and settings and that identification of individuals in the various groups prior to the development of dependence may prove to be a feasible approach to prevention.

The role of Brown University, it would seem, may well be threefold: 1. teaching of the treatment and recognition of alcoholism to students and residents, 2. research into the causes and mechanisms of alcoholism, and 3. coordination under academic auspices of a chain of treatment, research, and diagnostic centers for both acute and chronic alcoholism.

There is a genuine opportunity, and this symposium indicates that Brown is ready to accept the challenge.

UNITED WAY

Published elsewhere in this issue is an eloquent plea for support from the Medical Department Chairman of the 1975 United Way Campaign.

Physicians should be aware of the importance to community welfare of the 123 member agencies. In our daily activities we lean heavily on them to

assist our patients and their families in moments of need and stress.

We urge our members to review their annual giving in the hope that they will be able to do a little better this year.



Editor's Mailbox

UNITED WAY

To the Editor:

The United Way of Southeastern New England cites its current situation with a plea for "extra effort in these times of economic stress to meet significant human need...by those who possibly can."

As Medical Department chairman for the 1975 United Way campaign, I believe that statement particularly relevant for physicians — those who *can*, and *must*, be acutely aware of responsibilities towards human need.

The United Way human service programs are faced with severe economic problems. Due to inflation and over 16 per cent unemployment in Rhode Island, there has been a 9.5 per cent cut-back in funding for 123 member agencies for the current year, plus a reduction in United Way staff. And nearly 20 per cent of United Way monies are directed towards health related services!

When we met with Doctor Stephen Hoyer, The Rhode Island Medical Society president, he expressed his personal involvement with the upcoming United Way campaign and assured us that he would do everything in his power to assure a representative, "fair share" pledge from the medical profession.

Area physicians increased pledges by 22 per cent last year. A recent national survey of medical giving ranked Rhode Island 209th in a review of 501 United Ways. That level of generosity is not to be rested upon as a laurel of honor, but rather should serve as an incentive for doctors to increase their personal sacrifice in 1975.

After mapping campaign plans with William H. Heisler, general chairman for the United Way of Southeastern New England, I and all the staff felt imbued by his dedication and leadership.

I feel confident that when you are asked to contribute by Mr. Heisler's volunteers, the same positive attitude will be felt. I'm certain that physicians will follow their historical heritage and place human need as a foremost priority, despite their own personal financial demands.

H. Nord Kitchen, *Chairman*
United Way Medical Department

UNIFIED AMA MEMBERSHIP

To the Editor:

This letter concerns the editorial entitled "The AMA and You" which appears on page 315 of the latest issue of the Rhode Island Medical Journal.

First of all, let me say that I have belonged to the AMA throughout my professional career and I am concerned about continuing my membership for the following reasons.

- 1) Before Medicare came on to the scene about ten years ago, the AMA did a very good job of informing the medical profession about this event and its possible consequences. However, exactly the opposite occurred when PSRO came along. The bill was filed, the law was on the books and hardly any doctor knew about this because the AMA did not keep us informed.
- 2) The recent malpractice problem is another example of the AMA not keeping doctors informed. Rhode Island was the twenty-fifth state where "claims made" policies were recommended and yet this event happened in the other twenty-four states without any professional publicity by the AMA.
- 3) The forthcoming dues increase in the AMA relates to how the money is spent. It is questionable whether or not money should be given to politicians and whether or not lobbying is in the best interest of increasing the efficiency and availability of medical care. The most graphic example of this is giving Representative Beard \$1,500 only to have his refusal printed on the front page of the paper.
- 4) The publications of the AMA have lost their quality. The loss of Doctor Mosher was very regrettable and certainly not in the best interest of the educational journals published by the AMA. The only good thing about the AMA publications is that *Prism* will no longer be published.
- 5) The alternative to the AMA which is not mentioned in the editorial is that of a physicians' union which, as with the AMA, has its advantages and disadvantages.

In conclusion, I feel that joining the AMA

(Continued on next page)

(For Editor's Reply see next page)

See Editorial page 398. Ed.



should be a personal decision and not a blind allegiance.

John R. Stuart, M.D.
Coordinator Surgical Services
Roger Wms. Gen. Hospital

* * *

UNIFIED AMA MEMBERSHIP (Cont'd)

These five criticisms of the AMA do not address the question of whether a strong, unified profession is something doctors want. This is the central issue. It appears that the writer feels no restriction in freedom to criticize the AMA, and no one has ever asked for blind allegiance. Physicians in the unified states do not hesitate to voice their opinions about specific AMA policies or activities, and year after year they continue to support each level of organized medicine. They too have made a personal decision — to join organized medicine or carry their share, *or* not join, and let others carry the load.

The first two criticisms regarding the lack of information on PSRO and malpractice insurance are somewhat baffling to those who have spent the last two years reading about little else. *AM News* has devoted vast amounts of space to these issues. The AMA Task Force on Professional Liability traveled thousands of miles and distributed reams of material on the crisis of professional liability insurance. Well over half the states have used the AMA model legislation to enact malpractice laws. Meanwhile, the same group has developed the concept of the AMA reinsurance company that has been approved by the House of Delegates and the Board of Trustees.

The third criticism regarding funding of politicians is probably based upon erroneous information disseminated by the public media. Literally not one penny of AMA dues money has ever gone to a political campaign. The American Medical Political Action Committee (AMPAC) receives solely voluntary contributions from physicians and spouses and is a separate corporate entity from the AMA.

As for the contribution to Representative Erward Beard's campaign, there was solid logic behind such an offer of assistance. Beard has been known for going to the media whenever he encountered a complaint from the people. He encourages this type of communication. It was natural to assume that a number of reasons, some of them cranks, would write to and call Mr. Beard complaining about some facet of medical care. In such cases, the RIMS can be and has been of assistance.

If Mr. Beard were to go to the press instead of the medical society every time he heard a complaint, he could generate a great deal of publicity and the medical profession could and would be unjustly accused of something. The offer of campaign assistance to Beard was merely an attempt to let him know of our existence and that the RIMS stands ready to give attention to a complaint from the public. RIMPAC made the contribution and the press exaggerated his refusal out of all proportion (*after he had previously said he would be delighted to have the assistance*).

Only one-half of one per cent of AMA's budget goes to maintain its lobbying staff with well over 80 per cent devoted to scientific medicine. The AMA does indeed lobby and lobbies effectively. It has lobbied for emergency medical services, new rural health care programs, better medical care for Indians, funding for maternal and child health care programs, increased funding for medical schools, and much other legislation designed to improve the delivery of medical care. It has also lobbied *against* legislation, such as the Health Manpower Bill, which had a provision for federal control of residencies and another provision which would force medical students to pay back federal money given to medical schools.

The fourth criticism regarding the quality of AMA publications may or may not be valid depending upon whom you ask. The Board of Trustees has heard strong opinions on both sides of the question. It is, however, devoted to providing first rate scientific information to its membership. Doctor Moser, the Editor of *JAMA*, left the AMA staff because he felt he could not accept the proposed budget restrictions, which were quite general throughout the AMA administrative structure. There was no disagreement over editorial content.

The fifth criticism, which suggests that a physicians' union would perhaps represent the profession better than the AMA, reflects a widely shared desire for organized medicine to be more aggressive in protecting physicians' interests. The AMA has recognized these expectations by official policy and by its actions. The AMA lawsuit against the controversial utilization review regulations has resulted in the withdrawal of these regulations. It has also filed suit against the MAC regulations, and further suits are contemplated. The AMA is the only organization with sufficient resources and clout to do this job for the profession.

EDITOR

II. KEYNOTE ADDRESS: HOW FUTURE PHYSICIANS MUST SEE THE ALCOHOLIC

(Continued from page 390)

run the danger of aspiration pneumonia. Alcoholics may resist anesthesia, or after anesthesia may suffer prolonged respiratory depression. In addition to presenting problems during surgery, alcoholism is a causative factor in many problems which lead to surgery: i.e., cirrhosis of the liver, traumatic injury, and chronic pancreatitis. Multiply all these problems by the fact that 8 to 15 per cent of all patients admitted to general hospitals are alcoholics and that a large number of them are there for surgery.

ROLE OF MEDICAL EDUCATION

Obviously, medical practice and medical education cannot be complete unless alcoholism is actively acknowledged. This acknowledgement could be given not only in advanced medical courses, but also in the basic sciences such as physiology and biochemistry.

But, while the student should come to understand alcoholism in its different forms and ramifications, his orientation should not be exclusively medical. He should understand alcoholism in *human* as well as medical terms. Indeed, he cannot truly be a physician unless he also is a humanist. Let him know, for example, the troubles beneath the alcoholism which have driven men to Skid Row. But also let him know that only 5 per cent of the nation's alcoholics are on Skid Row — that most of them want to make some adjustment to the world and that one of every five or six patients he will be seeing in his office will be an alcoholic in some form or degree.

Let the student know that alcoholism is a medical sickness. But also let him know that it also is, as Doctor Karl Menninger has said, "a suicidal flight from disease; a disastrous attempt to the self-cure of an unseen inner conflict, aggravated, but not primarily caused, by external conflict. It is literally true that the alcoholic does not know why he drinks." Let the student recognize that, because alcoholism involves that elusive inner conflict, its treatment can be hard and slow and frustrating. But let him also realize that medicine must be seen in terms of *patients* and not simply in terms of *diseases*. Unless he develops this realization as a student, he is unlikely to acquire it later.

ALCOHOLISM IN STUDENTS' FUTURE

Let him know that, if he becomes a corporation staff physician or consultant, he must face possible alcoholism at every level — from office boy to top executive. He should be prepared to hold seminars and give consultations on the problem, in accordance with the enlightened attitude which more and more companies have been assuming. Let the student be exposed to various viewpoints and insights on the alcoholic — from the social worker, the clergyman, the judge, or the law-enforcement officer. In short, let him see the alcoholic as a "whole man." Let him see the alcoholic as one of the representative figures of a troubled society that is the ultimate beneficiary of each patient's cure. In addition, let the future physician see *himself* as a whole who may have a disposition toward alcohol. Studies have also shown that doctors, because of their personal backgrounds and occupational pressures, may have a higher rate of alcoholism than their patients. The medical student will be stronger as a human being and as a future physician if he realizes that the medical weaknesses he encounters may also be his own. He must perceive his bond to the struggles within his future patients as well as to the struggles of the world beyond those patients.

James B. Conant, former president of Harvard, said: "The great universities of the world have been more often fields of battle than ivory towers of contemplation." I hail your determination as educational strategists against the alcoholic problem, and I hail your zeal to do battle against that great enemy — an enemy which is all the greater because it is within man himself.

ONE SENTENCE ESSAY

I've been rich and I've been poor, and rich is better.

... Joe E. Lewis, Comedian

MEDICAL MALPRACTICE INSURANCE AND UMBRELLA LIABILITY INSURANCE

For No Obligation Quotations or Assistance
CALL 751-3312

LEN DiPRETE

DUNCAN B. CAMPBELL CO.

9 So. Angell Street
Wayland Square, Providence, R.I.

Happy to make Home or Office Visits or give
Phone Quotations

STATEMENT OF OWNERSHIP, MANAGEMENT AND
CIRCULATION
(Act of August 12, 1970: Section 3685, Title 39,
United States Code)

1. Date of filing October 1, 1975.
2. Title of publication: *Rhode Island Medical Journal*
3. Frequency of issue: *Monthly*
4. Location of known office of publication: 106 Francis St., Providence, Providence County, Rhode Island 02903
5. Location of headquarters or general business offices of the publishers: 106 Francis St., Providence, R. I. 02903
6. Names and addresses of publisher, editor and managing editor:
Publisher: Rhode Island Medical Society, 106 Francis St., Providence, R. I. 02903
Editor: Seebert J. Goldowsky, 458 Wayland Ave., Providence, R. I. 02906.
Managing Editor: Timothy B. Norbeck, 3 Ferncliff Road, Barrington, R. I. 02806.
7. *Owner:* Rhode Island Medical Society, 106 Francis St., Providence, R. I. 02903
8. Known bondholders, mortgagees, and other security holder owning 1 per cent or more of total amount of bonds, mortgages or other securities: None
9. For optional completion by publishers mailing at the regular rates (Section 132.121, Postal Service Manual)
39 U. S. C. 3626 provides in pertinent part: "No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates."
In accordance with the provisions of this statute, I hereby request permission to mail the publication named in item 1 at the reduced postage rates presently authorized by 39 U. S. C. 3626.
10. For completion by nonprofit organizations authorized to mail at special rates (Section 132.122, Postal Manual)
The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during preceding 12 months
11. Extent and nature of circulation

	Average Copies each issue during preceding 12 Months	Actual No. of Copies of single issue Published nearest to filing date
A. Total no. of copies printed (Net Press Run)	1557	1557
B. Paid Circulation		
1. Sales through dealers and carriers, street vendors and counter sales	—	—
2. Mail subscriptions	1393	1393
C. Total Paid Circulation	1393	1393
D. Free distribution by mail, car- rier or other means		
1. Samples, complimentary, and other free copies	149	149
2. Copies distributed to news agents, but not sold	—	—
E. Total Distribution (Sum of C and D)	1542	1542
F. Office Use, Left-over, Un- accounted, Spoiled After Printing	15	15
G. Total, Sum of E and F— Should equal net press run shown in A)	1557	1557

I certify that the statements made by me above are correct and complete.

Seebert J. Goldowsky, M.D.



Pro-Banthine®

brand of
propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

'Antiacid' action for ulcer patients...

one of the many things you need in an anticholinergic.



Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthine is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action — Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action — Pro-Banthine helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

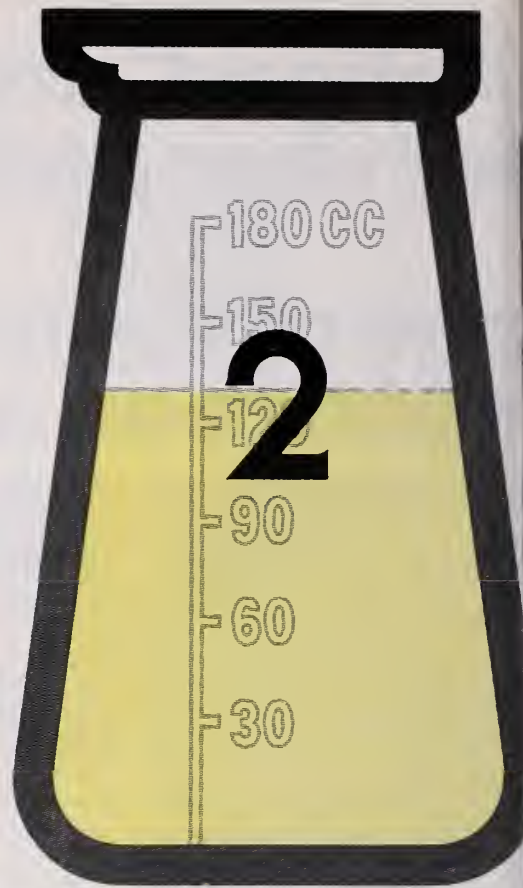
Mild anticholinergic action — Pro-Banthine® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthine® (propantheline bromide)

a good
option
in peptic
ulcer



**Adequate
fluid
intake**



**Frequent
voiding**

The 3rd Basic



Gantanol[®] (sulfamethoxazole) B.I.D.

our tablets (0.5 Gm each) STAT-
then 2 tablets B.I.D. for 10-14 days

asic therapy with
onvenience for
cute nonobstructed
ystitis

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic non-obstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

• Effective against susceptible E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis and, less frequently, Proteus vulgaris

DYAZIDE[®]

makes sense

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

*

WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance.
Hydrochlorothiazide to help keep
blood pressure down and triamterene
to help keep potassium levels up.

III. ON UNDERGRADUATE EDUCATION: ALCOHOLISM EDUCATION IN A MEDICAL SCHOOL

(Continued from page 392)

by six to ten professionals and students. This type of group experience for residents in psychiatry and students in social work is essential if they are going to treat alcoholics. Not all alcoholics feel comfortable in A A meetings, yet they may thrive in group therapy. A planned training program in this activity would assign a psychiatric resident and a social worker to act as co-therapists in one group for a few months and then to conduct their own supervised group for at least six months.

Although our curriculum has been developed on an interdisciplinary basis, the actual education in the basic facts concerning alcoholism and drug abuse is given in the six individual schools. Alcoholism education in the Medical School has been more advanced and intensive. The curricula in three of the other five professional schools are now being developed. For the first time the Division of Alcoholism and Drug Abuse has placed faculty members this year in the Schools of Social Work, Nursing, and Pharmacy.

FOR SALE

1. B & L Deluxe Refracting Chair and stand — almost new condition
1. B & L Ophthalmometer — new condition
1. Portable Trial lens set to 10 Diopeters — good condition
1. Shuron Portable Projector — good condition
1. Lemay Diamond Edger Bevel and Rimless
1. A.O. Lensometer

DR. JOHN FALINO, Retired

231-4411 — 231-5766

CURRICULUM DEVELOPMENT

During the first four years of our educational program most alcoholism education in the Medical School was within the psychiatric curriculum, although efforts were made to incorporate it into the appropriate tracts of the curriculum (e.g. the pharmacology of alcoholism in a lecture by the Department of Pharmacy). As a result, the curriculum* which has been developed was taught by the Director of the Division, the Clinical Director of the subdivision of Drug Abuse, and the Coordinator of Training. In addition to the lectures and seminars in the basic curriculum of some 20 hours, the Division offers several elective seminars and clinical assignments.

Great progress has been made in effecting positive attitudinal changes in the faculty. But these changes were brought about only after years of intensive effort. It is apparent that — as faculty attitudes change in regard to biases formed by misinformation, ignorance, and lack of understanding — curricular change also will be implemented. But courses still exist which ignore the importance of alcoholism as the basis for certain diseases. For example, one pathology course barely mentions alcoholism when discussing disease of the liver. An encouraging attitudinal change has taken place among both medical faculty and students. In the junior seminar on alcoholism and drug abuse, for instance, students overwhelmingly indicated that they were tired of our "lamenting about attitudes," had accepted alcoholism and drug abuse as diseases, and wanted the course emphasis directed toward scientific fact and clinical skills. Through student input we have revised the course content to focus on medical information and skills. Reinforcing this attitudinal change is the observation that interns who graduated in 1974 (the first group to utilize our entire program) have a very positive attitude toward the care and treatment of the alcoholic. Similarly, many new faculty members are interested in changing the interdisciplinary curriculum to include alcoholism and drug abuse education in the appropriate tract.

The development of an alcoholism and drug abuse curriculum in an established medical school is fraught with many obstacles. But the satisfaction in seeing attitudinal changes affecting the quality of clinical treatment outweighs the struggle.

*A detailed course outline may be obtained from: The Office of External Affairs, Biology and Medicine, Box G, Brown University, Providence, Rhode Island 02912.



IV ON GRADUATE EDUCATION: ALCOHOLISM INSTRUCTION IN GRADUATE MEDICAL EDUCATION

(Continued from page 395)

sible I ask a recovering alcoholic to speak, and I leave time for questions and discussion. I always end with a particular emphasis on the problem of alcoholism among physicians.

In order to assess their thinking about alcoholism I have surveyed nearly 100 practicing physicians on their knowledge and interest in alcoholism. They do better in answering the same factual questions about alcoholism than did the psychiatric residents; they are better able to define alcoholism; they generally think of alcoholism as a disease and see it as a "very important" problem in the field of medicine. But they do feel insufficiently prepared to treat the patient's alcoholism. Most have some problem in treating the alcohol withdrawal syndrome — more than half routinely use intravenous fluids and physical restraints, for instance. Nearly half responded that they consider Alcoholics Anonymous a "temperance movement," and many underestimate the prevalence of alcoholism in hospitals.

COPING WITH THE ALCOHOLIC PATIENT

Recently I undertook another small study. At a seminar with 35 practicing physicians I gave a pre-test and told them I would follow up with a

questionnaire a month later. While responses of only half of the physicians have been returned to date — and I hesitate to generalize from figures which are not statistically significant — I was pleased to see that the doctors responded quite favorably. They indicated that they felt more confident in their ability to cope with the alcoholic patient. More than half felt that the seminar had changed their attitudes toward alcoholism and alcoholics. Almost all agreed that it assisted them in diagnosing alcoholism and treating the alcoholic. Specifically, they indicated that they now would refer their alcoholic patients to AA and refer their families to Al-Anon or Alateen. Three-quarters of the respondents said they would prescribe Antabuse,[®] and fewer than one-third indicated that they would still prescribe minor tranquilizers for alcoholics on an out-patient basis. The questionnaire also indicated that after the conference doctors were diagnosing alcoholism more frequently.

My experiences with alcoholism instruction in graduate medical education have served to impress upon me that it doesn't matter so much whether you are educating psychiatric or medical house staff of practicing physicians — positive education must often begin with attitude change. Attitude change may begin by taking a careful look at our own drinking practices, at the drinking of others, and our reaction to it. Unless we can look at these po-

(Continued on next page)



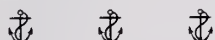
Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

tential problem areas objectively, there is small hope that we can be objective with the alcoholic patient.

POSITIVE ATTITUDE ESSENTIAL

I believe the treating person must have an optimistic, positive, and accepting attitude toward the alcoholic. This attitude must be based on the conviction that the alcoholic is not a weak and morally bankrupt individual, but a person who has a disease. It is important that the therapist convey this acceptance and to believe honestly that recovery is possible. If a doctor is able to objectify his own "hang-ups" with drinking and can accept the alcoholic as a sick person, the path is open for potential recovery. If a doctor can feel a part of this remarkable recovery process, he will truly become educated about alcoholism.



V BROWN UNIVERSITY ALCOHOLISM CONFERENCE: A SUMMARY OF THE DISCUSSIONS

(Continued from page 397)

- (3.) have patient carry Antabuse® Card.
- (4.) contraindicated with severe brain damage, strongly suicidal patients, severe coronary artery disease, etc.
- (5.) Antabuse® enhances effect of Coumadin,® inhibits metabolism of Dilantin,® and causes side effects when administered simultaneously with Isoniazid (INH) or Flagyl.®
- (6.) patient to avoid alcohol-containing food and drugs.
- 8.) Prescribe minor tranquilizers with the greatest caution, if at all.
- 9.) Refer to specialists and alcoholism treatment facilities.
- 10.) Utilize confrontive, yet supportive, therapy working toward abstinence as an early goal.

PARTICIPANTS IN THE CONFERENCE

LEVI C. ADAMS
Assistant Vice President
Biology and Medicine
Brown University

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs
Brown University

CHARLES E. BECKER, M.D.
Head, Div. of Clinical Pharmacology
San Francisco Gen. Hospital

WILLEM G. A. BOSMA, M.D.
Director

Div. on Alcoholism and Drug Abuse
University of Maryland Hospital

SIDNEY COBB, M.D., M.P.H.
Professor of Psychiatry and Community Health
Brown University

KIP H. COHEN
Publisher, Medical Opinion

JOHN A. EWING, M.D.

Professor of Psychiatry
University of North Carolina
BEN W. FEATHER, M.D. Ph.D.
Professor of Medical Science and
Chairman, Section of Psychiatry
and Human Behavior
Brown University

JOSEPH BENFARADO, M.D.

University of Wisconsin
LEE GLADSTONE, M.D.
Northwestern Univ. School of Medicine
PIERRE M. GALLETI, M.D., Ph.D.
Vice President

Biology and Medicine

Brown University

DAVID S. GREER, M.D.

Associate Dean of Medical Affairs
Brown University

JOHN B. GRIFFIN, JR., M.D.

Associate Professor of Psychiatry
Director of Medical Student Training
Emory University School of Medicine
DWIGHT B. HEATH, Ph.D.

Professor of Anthropology

Brown University

ABRAHAM HELLER, M.D.

Clinical Assoc. Prof. of Psychiatry
Brown University

ROSWELL D. JOHNSON, M.D.

Clinical Prof. of Community Health
Director, Health Services

Brown University

BENJAMIN KISSIN, M.D.

Professor of Psychiatry
Director, Div. of Alcoholism and Drug Dependence
State University of New York

Downstate Medical Center

CHARLES S. LIEBER, M.D.

Professor of Medicine
Mount Sinai School of Medicine

DEMMIE G. MAYFIELD, M.D.

Clinical Professor of Psychiatry
Brown University

DONALD G. MILLAR

Former Brown Trustee

CARL B. MONROE, M.D.

Assistant Director
Professional Services

Roche Laboratories

JAMES J. O'DONNELL

Assistant Director
Alcoholism Programs

University of Maryland

THOMAS J. PAOLINO, M.D.

Clinical Instructor of Psychiatry
and Human Behavior

Brown University

HENRY L. ROSETT, M.D.

Associate Professor of Psychiatry
Boston Univ. School of Medicine

FRANK A. SEIXAS, M.D.

Medical Director

Nat'l. Council on Alcoholism, Inc.

ROBERT STRAUS, M.D.

Professor and Chairman
Department of Behavioral Science

University of Kentucky

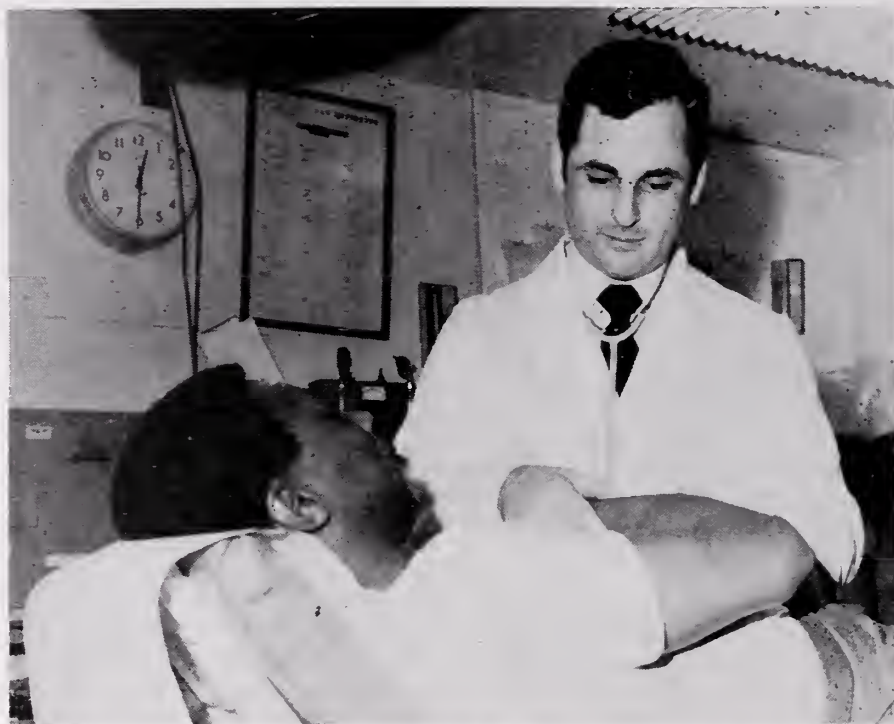
MALCOLM TODD, M.D.

President

American Medical Association

(Concluded on page 414)

How about an extra \$12,500 every year?



(And the chance to practice medicine at its professional best?)

We offer both.

The \$12,500 bonus you can get immediately.

The high degree of professionalism you'll find throughout your career in Air Force medicine.

In the Air Force you'll have the opportunity to practice health care at its innovative best. You won't have to consider the patient's ability to pay for treatment. At the same time, you won't have to worry about supplies, equipment, insurance, and other details that take your mind and time away from medicine.

In the Air Force you'll earn excellent pay (both officer's and professional pay). You'll also get 30 days of paid vacation each year with the opportunity to travel to Europe, the Far East and other parts of the world.

In the Air Force you can practice the most sophisticated health care. And now you can get a healthy \$12,500 bonus every year to do it.

Get the details about opportunities open

to young doctors in Air Force medicine. Just fill out the coupon.

Medical Recruiting Office
123 Main Street
Milford, CT 06460
Tel: (203) 878-0117

Please send me more information about becoming an Air Force physician.

Name _____

Address _____

City _____

State _____ Zip _____

Telephone _____

Age _____ Specialty _____

**A Healthy Bonus.
Professionalism.
Air Force Medicine.**

Report Of The House Of Delegates

(Continued from August Issue)

RESOLUTION ON BANK CARDS

Whereas, The American Medical Association has declared that it is not unethical for physicians to accept the use of bank card plan in payment of fees, provided that the bank card plan meets certain guidelines established by the Judicial Council of the American Medical Association; and

Whereas, There has been in the past few years an increase in the number of requests from physicians of the Rhode Island Medical Society to use the bank card type of payment of fees; and

Whereas, This method of payment of medical fees is to be on a strictly voluntary basis on both the part of the physician and on the part of the patient; therefore

Be It Resolved, That the Rhode Island Medical Society go on record as approving that a physician may participate ethically in a bank card plan; and

Be It Further Resolved, That the following principles be used by the Rhode Island Medical Society for guidance in approving a bank card plan:

1. The Rhode Island Medical Society should be satisfied as to the financial and professional integrity of the bank card plan.

2. Bank card plans should make their plans open to all physicians on the same terms, and the plans should not exploit or capitalize on physicians' participation in the plans.

3. The bank card plan should be notified that the listing of physicians in directories of participating members is contrary to the ethics of the medical profession.

4. A physician may not, because of his participation, increase his fees for medical services rendered the patient.

5. The physician may not use the plan to

solicit patients and should not encourage patients to use the plan.

6. Plaques, signs or other devices indicating participation in the plan should be kept to a discreet and dignified minimum in the office and should not be visible outside the physician's office; and

Be It Further Resolved, That the use of a bank card in connection with the payment of larger fees — which might normally be paid to the physician in installments — is not to be encouraged. All members of the Society are expected to continue the traditional practice of permitting patients of limited means to pay relatively large fees in installments without interest or carrying charges. Out of respect for the dignity and traditions of the medical profession, the physician may not relieve himself of his obligations "to render service to humanity, reward or financial gain being a subordinate consideration"; and

Be It Further Resolved, That the Rhode Island Medical Society not encourage its members to utilize the bank card plan in payment of medical fees.

RAUL NODARSE, M.D.

American Medical Association
123rd Annual Convention
Chicago, Illinois
June 23-27, 1974

A change in the method of electing AMA Trustees, a definitive policy statement on PSRO's, the need for additional safeguards to preserve the confidentiality of medical records, and new recommendations which affect the relationship between hospitals and hospital medical staffs were among the important items approved by Delegates at the 123rd Annual Convention in Chicago.

The House approved bylaws changes which re-

PROGRAM IN FAMILY MEDICINE

Brown University has a new and growing Program in Family Medicine. We are seeking a Board certified family physician to assume the full-time position of Assistant Director of our model Family Care Center. Broad spectrum of teaching, research, and clinical opportunities. Liberal salary plus full faculty benefits. Send resume to David S. Greer, M.D., Associate Dean of Medical Affairs, Box G, Brown University, Providence, Rhode Island, 02912. Brown University is an Equal Employment Opportunity Affirmative Action Employer and encourages applications from members of minority groups and women.

place the "slot method" of electing trustees by the "simultaneous election of candidates to several positions of equal rank," in which all candidates run for board vacancies on a single ballot.

Under the new method, trustees for full, three-year terms are elected first, followed by the selection of trustees to fill unexpired terms. Election of the AMA president-elect, vice-president, and speaker and vice-speaker of the House remains on a separate basis.

Delegates selected Max Parrott, of Portland, Ore., as president-elect.

Elections:

In addition to Doctor Parrott, others elected or re-elected to positions in the Association were:

Vice-President: Joseph M. Ribar, Alaska.

Speaker of the House: Tom E. Nesbitt, Tennessee (re-elected).

Vice-Speaker of the House: William Y. Rial, Pennsylvania (re-elected).

Trustees, for three-year terms: Daniel Cloud, Arizona; James M. Blake, New York; Hoyt D. Gardner, Kentucky; Raymond T. Holden, District of Columbia (re-elected). For the unexpired two-year term of James H. Sammons, AMA executive vice-president-designate, Frank J. Jirka, Illinois, and for the unexpired one-year term of Doctor Parrott, Joe T. Nelson, Texas.

Judicial Council: Samuel R. Sherman, California, succeeding Charles C. Smeltzer, Tennessee.

Council on Constitution and Bylaws: Urban H. Eversole, Massachusetts, succeeding Robert Mayo Tenery, Texas; Herman J. Smith, Iowa, succeeding Doctor Cloud, elected a trustee.

Council on Medical Education: Richard G. Connar, Florida, succeeding William A. Sodeman, Pennsylvania; Joseph White, Jr., Pennsylvania, re-elected; Charles Verheyden, Minnesota (intern-

resident member), succeeding Louis W. Burgher, Minnesota.

Council on Medical Service: John G. Morrison, California, succeeding John M. Rumsey, California; Paul W. Burleson, Alabama, re-elected; Robert T. Kelly, Minnesota, succeeding Hector W. Benoit, Jr., Missouri; Douglas Hiza, Iowa (intern-resident member), succeeding Daniel Ostergaard, Minnesota.

Address of Vice President of the United States:

Addressing the House on Tuesday, June 25, Vice President Gerald Ford advocated some form of national health insurance, but warned that in the process of its development, there should be no further erosion of patient confidentiality.

Though it had been rumored that Ford would address the PSRO issue, his only passing reference was:

"I've been getting a lot of free advice lately on how to run my business. I have not necessarily followed this advice. So, I won't give you any free advice on how to run your business. In my view on PSRO, (p)oliticians (s)hould (r)emain (o)ut of it."

Returning to his text, the vice president asserted that with the vast resources of the nation, there is "no excuse for a single American to be deprived of the finest treatment available."

Ford said a national health insurance program is necessary because of the prohibitive costs of catastrophic illnesses and the need to more effectively use and distribute medical resources. While declaring the physician should work for his patients and "not for the bureaucrats in Washington," he added that the "government must do for the individual citizen what he cannot do for himself."

Among the NHI proposals mentioned by the vice president were the Administration's own plan, the Kennedy-Mills measure, and the AMA's Mediscredit concept, for which he offered congratulations to the AMA "for its constructive attitude." He added that in the NHI discussion, "the AMA is not the problem but a part of a solution to the problem."

Ford said even with the diversity of NHI proposals in Congress, there is "a willingness to compromise," and added that he personally favors a "free enterprise approach involving private and voluntary philosophies."

The vice president asked that physicians be willing to participate in affecting some sort of NHI compromise during the present Congress,



*Get your family
together for the
Portrait you have
been promising
yourself!*

Call now for an appointment!

353-2694

D. A. Gunning Studio

14 Homewood Ave. N. Providence, R.I.

"instead of an abdication to those who would impose a dogmatic formula through a 'veto-proof' Congress they hope to elect come Nov. 5, 1974."

Turning to confidentiality, Ford said that while ways must be found to minimize federal involvement in health care delivery while achieving an effective private/public health care partnership, it is essential that we avoid bureaucratic intervention between the doctor and his patient — intervention that compromises the rights and privacy of both."

Physicians and the Government:

PSRO's — Speculation over possible changes in PSRO policy by the House dominated the attention of those attending the convention, including the media.

During its day-long hearing on Monday, June 24, Reference Committee A considered two reports and 25 resolutions bearing on the issue, and estimated that 64 speakers addressed themselves to PSRO.

But on Wednesday, the delegates — cognizant of the hours of debate devoted to PSRO at Anaheim last December and in New York City last June — overwhelmingly voted (202 to 24) to terminate debate after a few minutes.

Then the House adopted a substitute resolution on PSRO proposed by the reference committee, whose members emphasized that the resolution provides the association with a "clear-cut, definitive position which cannot be misunderstood by anyone inside or outside this House of Delegates." The resolution:

—Instructs the Board of Trustees to seek constructive amendments to the PSRO program, particularly in potentially dangerous areas such as confidentiality, malpractice, development of norms, quality of care, and the authority of the Secretary of HEW.

—Directs the AMA to continue efforts to achieve legislation which allows the profession to perform peer review according to established medical philosophy and the best interests of the patient.

—Emphasizes that state associations which elect non-compliance with PSRO are not prevented from doing so by the new policy, but urges such associations to develop effective non-PSRO review programs embodying the principles endorsed by the profession as constructive PSRO alternatives.

The new policy also provides that in the event that the PSRO program does, in fact, adversely affect patient care or conflict with AMA policy,

then "the Board of Trustees (will) be instructed to use all legal and legislative means to rectify these shortcomings."

Extension of Policy on National Health Insurance — Two statements on national health insurance were adopted after lengthy debate. One calls on the Board of Trustees to cooperate with state associations "to attempt to devise mechanisms mutually acceptable to the private medical and insurance communities which will ensure the provision of health insurance coverage through the purchase of private health insurance, and to seek means to secure favorable Congressional and public support for their adoption."

During discussion, it was pointed out that the addition to the NHI policy does not affect AMA support for Medigap, but is intended to stimulate new health insurance mechanisms. The second resolution calls on the AMA and component associations to work to detach "any national health insurance program from the controlling intrusions of existing PSRO laws and regulations."

Support for Drug Industry, Action on FDA — The House adopted two resolutions bearing on drugs. One directs the AMA to continue its support of the pharmaceutical industry in efforts to develop and market pharmaceutical products meeting proper standards of safety and efficacy. The other resolution directs the AMA to "exert all efforts to amend or repeal the Kefauver-Harris" drug amendments of 1962, which gave the FDA broad new powers in drug manufacturing and marketing, and which critics of the FDA contend has tended to stifle the developing and marketing of new drugs in the United States.

Oppose "Public Utility" Medicine — The House went on record as being opposed to certain bills in Congress which would replace the federal "Health Professions Educational Assistance Act" which expired June 30. Under the bills, compre-

PRIME OFFICE SPACE FOR LEASE

PAWTUCKET OPPOSITE MEMORIAL HOSPITAL

- NEWLY CONSTRUCTED
- CARPETING
- HEAT
- PARKING
- 4 & 6 ROOM SUITES

**CALL ALLIED INVESTMENT
434-2974 or 433-0759**

hensive health planning programs would be replaced with public utility type bodies which would control certain aspects of health education and health care delivery, and medical licensure. An amended resolution adopted by the House directs the Board of Trustees to mobilize AMA membership in opposition to offensive sections of the proposed legislation and take strong actions on other fronts.

In other actions affecting physicians and the government, and other third parties, the House:

—Directs the AMA to seek an extension of from 30 to 90 days to respond to proposed health regulations printed in the Federal Register, and that government agencies using the Federal Register for rule-promulgating purposes be urged to hold public hearings on the merit of proposed legislation.

—Calls on the AMA to oppose the concept of claims rejection on the basis of "diagnostic admission" or "lack of medical necessity" without prior physician notification, and to recommend a peer review mechanism be established independent of the third-party carrier to review claim conflicts with such mechanisms to be established by existing medical foundations, medical societies, or other

independent peer review organizations.

—Requests the AMA to work with third parties to secure increased acceptance of the AMA uniform health insurance claim form and urges state associations to encourage acceptance of the form by insurance commissioners and, if necessary, through state legislation.

—Urges continued AMA efforts to prevent future imposition of government fee controls, opposes the mandatory imposition of a "Health-card" as the payment mechanism under the Administration's national health insurance plan, and instead, reaffirmed the right of the physician to bill patients directly.

Physicians and the Public:

Confidentiality of Patient Records — The House adopted two reports bearing on confidentiality of medical records. Report I of the Council on Medical Service describes a wide-ranging series of proposals to enable the medical profession and insurance companies to "maintain the confidentiality and security of patient information." Report S of the Board of Trustees notes that the Council on Legislation is developing model legislation as a guide to possible state legislation to preserve confidentiality and that a model bill should be ready for consideration by the House at the 1974 Clinical Session in Portland, Oregon.

Transport of Radioactive Material via Airlines — The House put the AMA on record as recommending that the shipment of radioactive materials for medical use via airlines be shipped "under strictly enforced, existing federal regulations which guarantee the actual low potential hazard" of such materials to passengers and crews and directed that the recommendation be presented to appropriate federal agencies for implementation.

Physicians and Hospitals and Medical Schools:

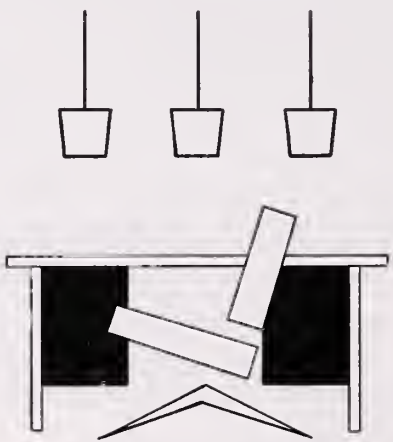
Report on Physician-Hospital Relations, 1974 — The House adopted the 104-page "Report on Physician Hospital Relations, 1974," compiled by the Council on Medical Service and its Committee on Private Practice. An update of an earlier report made in 1964, the 1974 version contains 14 specific recommendations to cope with problems developing between some hospitals and their medical staffs. Among other things, the recommendations are aimed at protecting medical staffs against unilateral action by hospital governing boards relative to staff bylaws, rules, and regulations.

Students, Interns and Residents — Two informational reports dealing with possible guidelines

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) Gaspee 1-5228

for house staffs in developing contracts in institutions in which they serve generated considerable discussion before Reference Committee C. Among those testifying were medical students, residents, faculty members, hospital directors, and members of the AMA's Board of Trustees and Council on Medical Service. *Because of the importance and the complexity of the issues involved, the two reports, plus a revised report submitted by the Intern and Resident Business Session during the convention, were referred to the Board of Trustees for further study and consultation with appropriate groups. Delegates directed the Board to report back at the VTGD Clinical Session.*

The House adopted a resolution calling for the AMA, through appropriate committees and councils, to assure due process for medical students, and requested a further report at the next Clinical Session.

Another resolution proposing guidelines for "Fair, Professional Relationships Between Training Institutions and House Officers" (intended for inclusion in the essentials of approved internships, and residencies) was referred for further study and report back at the Clinical Session.

The House adopted a resolution calling on the AMA to encourage — and urging medical schools to implement — a series of lecture programs for students on the socio-economic aspects of medicine.

New Liaison Committee on Medical Education — Delegates adopted Board of Trustees Report I calling for the establishment of a new Liaison Committee on Continuing Medical Education. Structure and duties of the new committee have been worked out by AMA representatives and those representing the American Board of Medical Specialties, the American Hospital Association, the Association of Medical Specialties, and the Council of Medical Specialty Societies.

In other actions, the House:

— Supported a moratorium on the licensure of allied health occupations until the end of 1975.

— Adopted a report containing "Essentials of an Accredited Educational Program for the Surgeon's Assistant."

— And reaffirmed the AMA's opposition to blanket pre-admission certification of hospital patients by governmental or hospital edict.

— Adopted a resolution urging the AMA to support the development of preceptor programs in primary patient care to stimulate the production of more primary care physicians.

Association and Internal Matters of the House:

Specialty Representation in the House: In response to proposals to increase specialty representation in the House, the Reference Committee on Constitution and Bylaws reported extensive testimony, and urged "all concerned parties to increase communication, cooperation and liaison" to resolve the complex question.

The House adopted the reference committee report, and referred report H of the Board of Trustees containing proposed modifications for specialty representation in the House to the Council on Constitution and Bylaws for inclusion in its continuing study.

Malpractice Problems — A resolution calling on the AMA and constituent societies to "institute a nationwide public education program to inform the public" of malpractice problems, and for the AMA to "spearhead state and federal legislation" to correct malpractice inequities, was referred to the Board of Trustees and its Committee on Insurance for report back at the 1974 Clinical Session.

Membership Opinion Polls — The House concurred in recommendations to reconstitute the Committee on Membership Opinion Polls as a Special Committee of the House, and authorized future polls of membership opinion subject to approval of the Board of Trustees.

In other internal matters, the House:

— Requested changes in the constitution and bylaws to permit additional scientific sessions on a regional basis (to supplement the programs at the annual and clinical sessions) so the House can take affirmative action on the proposal at the 1974 Clinical Session.

— Instructed the Board of Trustees to distribute to each delegate, alternate delegate and constituent state association a summary of actions

(Continued on next page)

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

**178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512**

Pharmacy License No. 225

taken at each meeting of the Board.

Miscellaneous Actions of the House:

In miscellaneous actions, the House:

— Adopted a resolution to amend the bylaws to make past AMA vice-presidents ex-officio members of the House (without voting privileges).

— Rejected the establishment of a nominating committee for councils of the House.

— Changed the name of the Section on Plastic and Reconstructive Surgery to the "Section on Plastic, Reconstructive, and Maxillofacial Surgery."

— Stipulated that Board reports nominating members of the Council on Medical Education contain a breakdown of current members' status to ensure a proper balance between fulltime educators and private practitioners.

— Rejected a resolution which called upon the AMA to encourage individual states to carry out referenda on the question of prohibiting the sale of handguns, but the House reaffirmed the 1973 policy that the AMA "urge the enforcement of strict penalties for the use of firearms in the commission of a crime."

— Rejected a proposal that AMA delegates be chosen by popular election within their respective state medical associations.

— Adopted a substitute resolution calling upon the AMA to recognize "brain death" as one of the various criteria by which death may be medically diagnosed.

Respectfully Submitted:

WILLIAM J. MACDONALD, M.D.

Delegate

JOHN J. CUNNINGHAM, M.D.

Alternate Delegate

STATE COMMITTEE ON PEER REVIEW

The Peer Review Committee has continued to receive more referrals from insurance companies as well as Blue Cross-Blue Shield. Most cases being referred are concerned with usual and customary charges. It is our policy to refer such cases to the Peer Review Committee of concern, who in turn refer their decision back to the State Committee for review. I would like to bring to your

LICENSE RENEWAL AND NEW LICENSE FORMS

Several Extraneous questions have been included with this year's Licensing Forms. We would like to point out that it is not necessary to answer such inquiries in order to receive the License.

attention that it is absolutely necessary that these complaints, when referred to the subcommittees, be handled as expeditiously as possible. We are bound by our bylaws to process these claims within a reasonable period of time.

Respectfully Submitted:

ALTON M. PAULL, M.D.

Chairman

ALCOHOLISM COMMITTEE

The Alcoholism Committee of the Rhode Island Medical Society agreed with data currently available, to the National Council on Alcoholism and its medical component, the American Society on Alcoholism, that:

1. Abstinence from alcohol is necessary for recovery from the disease of alcoholism.

2. Abstinence should not be regarded as the sole criterion for recovery. Other factors by which a person's life are enriched are important, such as improved physical and emotional health, better work performance, more rewarding relationships with the family and society, and increased economic efficiency.

3. As in many other diseases, relapses may take place but must never be thought to indicate that recovery is beyond reach. Total success is not expected in all cases from the start of treatment. Any improvement is positive and should be recognized and encouraged as a prelude to recovery.

4. There is a need for responsible research, carried out with proper controls as well as the judicious publication of results when pertinent.

However, in the present state of our knowledge, we firmly believe and emphasize that there can be no relaxation from the stated position that no alcoholic may return with safety to any use of alcohol.

Respectfully Submitted:

ROSWELL D. JOHNSON, M.D.

Chairman

COMMITTEE ON MEDICAL ASPECTS OF SPORTS

The Committee on the Medical Aspects of Sports is exceptionally happy to report that a successful and interesting meeting was held on the Medical Aspects of Sports at the University of Rhode Island on August 18 and 19, 1974. One hundred and seventy-four individuals registered for the course. The registrants came from 19 different states, one came from Canada and another person came from as far as New Zealand. Many

very favorable comments were received from the registrants who took the course.

The highlights of the course were talks by Dr. Joseph Godfrey, Professor of Orthopedic Surgery at Buffalo Medical School and Orthopedic Surgeon to the Buffalo Bills of the National Football League. Dr. Pat Palumbo of Washington, D.C., who is the Orthopedic Surgeon to the Washington Redskins also gave some exceptionally interesting talks on knee problems. Other interesting papers were presented by Dr. Kenneth Clarke, Professor of Health Education at Pennsylvania State University. Dr. Frank McCue of Charlottesville, Va., gave two different talks on Injuries of the Hands in Athletes. William Newell, Head Trainer and Physical Therapist at Purue University presented some interesting talks on Care from the Standpoint of Trainers' Care of Athletes. The meeting was so well received by the registrants that we are planning on conducting another meeting next year.

Respectfully Submitted:

A. A. SAVASTANO, M.D.
Chairman

EMERGENCY MEDICAL SERVICES COMMITTEE

Two hundred and eighty-five students enrolled in the Spring semester at Rhode Island Junior College in the "Rescue Practices and Emergency Aid Course." There were a total of seven classes. Four classes met at Rhode Island Junior College, Warwick, R.I., one class at Fogarty Memorial Hospital, Woonsocket, R.I., one class at South County Hospital, Wakefield, R.I., and one class at Newport Hospital, Newport, R.I.

This will bring the total of certified Emergency Medical Technicians to 964 out of approximately 1,600 rescue workers that operate in Rhode Island.

In addition to these qualified persons, 72 men from six Rhode Island communities were certified as Advanced Emergency Medical Technician personnel who will operate the Intensive Mobile Care Units in Cranston, Warwick, West Warwick, East Providence, Barrington, and hopefully Providence. Nearly all the equipment to make these units operational is in and installed and training runs began in May.

This Fall, the Emergency Medical Technician course was increased from 72 to 81 hours with the addition of an Ice Rescue Procedures Seminar and an abbreviated Defensive Driving course. It has been expanded to conform with the Department of Transportation national requirements.

The chairman has arranged the schedules of physicians who have participated in our training schedule and Cranston Deputy Fire Chief Ronald S. Jones, course coordinator, is supervising five other "Rescue Practices and Emergency Aid" instructors in covering the other aspects of training assisted by selected guest lecturers on various topics.

Respectfully Submitted:

ROBERT L. CONRAD, M.D.
Chairman

REPORT OF THE BOARD OF TRUSTEES OF THE MEDICAL SOCIETY

The Trustees considered Doctor Nodarse's request for the installation of handrails at the front steps and the stairs in the inner vestibule favorably and asked the Council for approval. This was granted and a bid by Eastern Construction was accepted. The work has been held up due to a shortage of materials but we have been assured that construction will be started in the near future. A single wrought iron rail will be placed in the center of each of the areas.

Air conditioning units were placed in the Executive Office and the Reading Room in June and have been greatly appreciated by the members of the staff. They have been used sparingly, running only on humid and very hot days, but it has been possible to work in comfort regardless of temperature.

Respectfully Submitted:

JOHN P. GRADY, M.D.

Chairman

Trustees of the Building

PHYSICIANS AND CARRIERS WORKMEN'S COMPENSATION

The Physicians and Carriers Workmen's Compensation Committee has had one meeting in July
(Continued on next page)

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island

HOpkins 7-8050

of 1974. Four cases were presented and satisfactory disposition made.

Respectfully Submitted:

WALTER C. COTTER, M.D.

Chairman

THE COMMITTEE ON AGING

The Committee on Aging of the Rhode Island Medical Society met September 11 at the Cedar Crest Nursing Centre. Included among the business discussions were: The report of the American Medical Association and HEW concerning the role of the medical director in the long term care facility; a distribution of guidelines for medical directors in the long term care facility; the function of medical directors; state nursing home association; enrollments in the AMA; perspectives and enrollment of members.

Also discussed, were AMA perspectives and long term care, the American Geriatric Society, and a lecture by Dr. Gerald Bernstein, a psychiatrist from the Harvard Medical School.

Respectfully Submitted:

RAYMOND E. MOFFITT, M.D.

Chairman

Council on Aging

COMMITTEE RESTRUCTURE

I move that the President of the Society be directed to revise the composition of the Committee on the Delivery of Medical Care as follows:

There shall be two members of the Committee from each of the component societies, one of whom should be a member who is working with any outside agency toward the development of an HMO and one member who is not so postured, except in the case of the Providence Medical Association in which there should be four members, two of whom should be members who are working with any outside agency toward the development of an HMO and two of whom should not be so postured. There shall be a chairman of the Committee selected at the discretion of the President.



3 HOME CARE PHYSICIANS

Full time, private practice in metropolitan Providence private homes, senior citizen homes, nursing homes, other home care facilities. \$50,000 to \$70,000 salary agreements or guarantees. Write:

WILLIAM E. REEVES, M.D.

P. O. Box 2346

Providence, R. I. 02906

Book Review

IT IS WELL WITH THE CHILD? by Susan Strauss. Garden City New York, Doubleday & Company, Inc., 1975. \$7.95.

This important 152 Page book is long overdue. It has been a pleasure to read it and offer this review. No physician or nurse or public health official will react to the situation described with other than complete agreement and praise. It describes the situation of one family having a child who is retarded, Be that child brain damaged "autistic" or otherwise severely handicapped the basic problem remains the same for the parents.

The difficulty of finding the proper diagnosis, adjustments to the situation, and the proper "solution" to the problem is great. The family problems involved, the realistic response, and the good and not so good results are described in great detail as seen by a parent who has lived with it for many years.

It describes the good results as applied to the parents, siblings, and family. The feelings of guilt, inadequacy, and selfishness are abolished. The knowledge and association with other families with the same or similar problems is of great help.

In addition, the same philosophy advocated by the author, applies in a similar manner to the parents faced with a child with a potential or probably fatal outcome. For this reason association in a group with other parents, such as those attending a large oncology clinic, makes things a bit easier to understand.

MAURICE ADELMAN, M.D.



V. BROWN UNIVERSITY ALCOHOLISM CONFERENCE: A SUMMARY OF THE DISCUSSIONS

(Concluded from page 405)

MAXWELL N. WEISMAN, M.D.

Director, Div. of Alcoholism Control
State of Maryland

ALBERT F. WESSEN, Ph.D.

Professor of Sociology and Medical Science
Chairman, Section of Community Health
Brown University

CHARLES WHITFIELD, M.D.

Department of Medicine
Southern Illinois University

KENNETH H. WILLIAMS, M.D.

Asst. Prof. of Psychiatry and Medicine
University of Pittsburgh



LIBRIUM[®]

(chlordiazepoxide HCl)

FOR ALL THE RIGHT REASONS.

- prompt and specific action
- documented benefit-to-risk ratio
- three dosage strengths to meet most therapeutic needs



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental

alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* *Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium[®] (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose[®] packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs[®] (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRIUM[®]

chlordiazepoxide HCl/Roche
5 mg, 10 mg, 25 mg capsules

Please see following page.

LIBRIUM[®] **(chlordiazepoxide HCl)**

FOR ALL THE RIGHT REASONS.

Yesterday's decision to use Librium for a clinically anxious patient was based on several good reasons. Safety. Effectiveness. Versatility. And the reasons you chose it yesterday are as valid today.

Librium has accumulated an unsurpassed clinical record. A record validated in several thousand papers published both here and abroad.

Librium, when used in proper dosage, rarely interferes with a patient's mental acuity or ability to perform. However, as with all CNS-acting agents, good medical practice suggests that patients be cautioned against hazardous activities requiring complete mental alertness.

Librium has an established safety record and a documented benefit-to-risk ratio. And Librium is used concomitantly with such drugs as cardiac glycosides, diuretics, anticholinergics and antacids.

So when you consider antianxiety therapy, consider Librium. It's a good choice. For today. And tomorrow.



PROVEN ADJUNCT FOR CLINICAL ANXIETY

LIBRIUM[®]
chlordiazepoxide HCl/Roche

Please see preceding page for summary of product information.

APR 23 1976

NEW YORK ACADEMY
OF MEDICINE

October 1975

R.I. Medical Journal

Vol. 58 No. 10

WAYNE STATE UNIVERSITY

NOV 28 1975

MEDICAL LIBRARY



Newsletter
Enclosed

Both often



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuation (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Known addiction-prone individuals under care

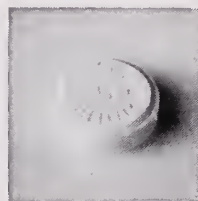
respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam) 2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider the full pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors or other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

OCTOBER, 1975

VOLUME 58, No. 10

EDITORIAL STAFF

Editor-in-Chief	Seebert J. Goldowsky, M.D.
Managing Editor	Timothy B. Norbeck
Ass't Managing Editor	Nancy Jo Cerep
Managing Editor Emeritus	John E. Farrell, Sc.D.

John F. W. Gilman, M.D., Chairman
John A. Dillon, M.D., Acting Chairman
Stanley M. Aronson, M.D.
Bertram H. Buxton, Jr., M.D.
Robert P. Davis, M.D.
Herbert Fanger, M.D.

Pierre M. Galletti, M.D., Ph.D.
Robert V. Lewis, M.D.
Peter L. Mathieu, M.D.
Jay M. Orson, M.D.
Henry T. Randall, M.D.
Guy A. Settipane, M.D.

TABLE OF CONTENTS

GALLSTONES: CONCEPTS OF PATHOGENESIS AND TREATMENT Edward A. Iannuccilli, M.D.	429
THE NATIONAL HEALTH PLANNING AND RESOURCE DEVELOPMENT ACT OF 1974 John T. Tierney	432
DON'T PRACTICE ON ME Judah M. Folkman, M.D.	436
THE INTRODUCTION OF CHEMICAL BLEACHING INTO THE UNITED STATES IN 1811 David C. Hardman	439
EDITORIAL	441
PRESIDENT'S PAGE	419
MESSAGE FROM THE DEAN	417
PHYSICIANS SEEKING OPPORTUNITIES IN RHODE ISLAND.	447
PERIPATETICS	443

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE. State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



HOUSE OF DELEGATES VOTES DUES INCREASE

Citing a need for additional revenue to meet present and future challenges, the House of Delegates, at its meeting on September 24th, approved a new dues structure of \$175 for Medical Society members.

In a general perspective, it was noted during the lively debate on the subject that most state medical societies had taken similar action in 1974 and 1975. Eleven states charge dues of \$250 or more, while another five require at least \$200. More than half have membership fees of at least \$150. Prior to the House action, only Virginia and Connecticut charged a lower amount than that which existed in Rhode Island.

Specifically, inflation, extra expenses involved in publishing the RHODE ISLAND MEDICAL JOURNAL, the cost of retaining a legislative counsel, and other operational expenditures of the Medical Society necessitated the dues increase. The House also expressed the desire that the \$22,000 taken from reserves in 1973 in order to repair the building be restored to its original state.

The new dues figure of \$175 per year will take effect on January 1, 1976.

AMA RAISES DUES

At the 124th Annual Convention of the American Medical Association held in Atlantic City, New Jersey in June, the House of Delegates voted to increase AMA dues from \$110 to \$250 per year. Repeatedly emphasizing longer AMA involvement in the myriad of problems confronting physicians and their patients, the House elected a Board of Trustees recommending a smaller increase and elected instead the larger obligation.

Testimony On Triplicate Prescription

At a public hearing to amend the regulation concerning reporting forms for controlled drugs, the so-called "Triplicate Prescription," held on October 7, 1975, Doctor John E. Farley, Jr., M.D., Chairman of the Rhode Island Medical Society Drug Abuse Committee, presented testimony to officials of the State Health Department. The complete text of his statement follows:

I am Doctor John Farley, Chairman of the Rhode Island Medical Society Drug Abuse Committee. My views represent the position of the Rhode Island Medical Society.

I have been practicing Pediatrics for 23 years and am Chairman of the East Providence Community Mental Health Board. I am clinical instructor in Pediatrics at the Brown University Medical School and am Director of Pediatrics at Emma Pendleton Bradley Hospital.

The Rhode Island Medical Society opposes the implementation of the Triplicate Prescription concept as a drug control mechanism because of its needless intrusion on the privacy of patients.

The only Federal requirement concerning prescription record keeping is that the pharmacist shall keep all prescriptions for inspection by proper state and federal authorities. The physician must record an individual federal code number on all prescriptions for controlled drugs.

Until July 1974, all pharmacists in Rhode Island were required to send to the Division of Drug Control a list of names and addresses of patients and the names of physicians who wrote prescriptions for controlled drugs. Since that time there has been no official requirement that this be done.

This older method, unique to Rhode Island, was actually a move to eliminate the necessity for on location inspection, a process apparently preferred by most other states. This elimination with its resultant centralized bookkeeping was

accomplished at the expense of non-offending patients' privacy.

The triplicate concept is an attempt to further centralize bookkeeping, shifting the onus of recording from the pharmacist to the physician.

This form exists in only five states having been rejected in all other states in which it was introduced in the legislature or by vetoes by the Governors.

The Triplicate concept had been promoted for at least 15 years by the Association of Drug Enforcement Officers and particularly by its New York representative as an efficient and economical drug control mechanism.

In this state the provision was eliminated.
(Continued on next page)

Secretary Reports Council Activities

The Council has held two regular meetings and two special meetings since the previous regular meeting of the House of Delegates. The following constitute major actions taken:

Council Appoints Dr. Howard Browne

Approval was given of the President's appointment of Howard S. Browne, Jr., M.D. of Newport as Trustee-at-Large to the Board of Trustees of the Medical Library for 1976.

Council Appoints Dr. Betty Mathieu

The Council approved of the appointment of Dr. Betty Mathieu as the Society's representative to the 15th National Conference of Physicians, Schools and Communities in Chicago on November 19.

Commendation of Dr. Chaset

The Council commended Dr. Nathan Chaset for his superb efforts as Chairman of the Mediation Committee. Doctor Chaset asked to be relieved of his duties after many years of dedicated service.

(Continued on next page)

inated from the last revision of state drug laws in 1974, apparently after the administration's representatives learned that there would be wide-spread opposition to it in the legislature by concerned parties. Instead, this confrontation was circumvented by giving the Director the power to devise his own forms. This device took the concept away from the eyes of the public through its representatives and diverted it into this obviously smaller and more private forum.

The rationale for the concept allegedly is to prevent multiple prescribing for the same patient of controlled drugs and to approach the problem of physician misuse of prescribing practices. The Director knows how strongly we feel about the latter and is aware of the Rhode Island Medical Society's offer of cooperation in any legal way to help him eradicate this problem. We abhor this misuse of authority and have been in communication with the Department of Health for two years about it. However, we have never felt that this concept was an efficient control, as it was obvious that even these sequentially numbered special prescriptions could be counterfeited or stolen. We also maintained that in the institution of this method, which had never been validated, the privacy of hundreds of thousands of non-offending patients would be invaded. Despite the fact that in the present statute there is a two year limit for holding data, thus preventing computerization, the fact remains that many of the children and adults receiving these medications for legitimate reasons may be receiving repeated prescriptions over a period of years, prolonging the retention of personal data.

Despite provisions in this statute which appear to protect against invasion, we feel that this data is by no means totally protected.

Some would argue that physicians report names of patients with communicable diseases to the Health Department. This obviously is to protect citizens from disease and is in no way parallel to keeping on record names of non-offending and innocent people who are no threat to the common good.

The other apparent similar situation is the transfer of patients' names on ADC prescriptions via the pharmacist to the State Mental Health Hospital Retardation Services.

Again, this is the only method the state will accept to reimburse the pharmacist so that our patients will be able to get the drugs we prescribe. If this method is used for a control purpose we do not feel that government so intended it and we object to it.

We again do not feel this is a similar situation.

We reiterate; this is not a federal requirement. In fact, we have correspondence from the last two administrators of the federal narcotic control agencies, neither of whom respond favorably to the triplicate prescription control concept.

Despite its strong promotion, it has been impossible to get meaningful data as to its efficiency from any state where it was in effect.

This problem was solved when the United States District Court Southern District of New York ruled on August 31, 1975, that "that part of the New York law that requires reposting the names and addresses of patients who receive Schedule II drugs as medication prescribed by licensed physicians is an unconstitutional interference with rights of privacy guaranteed under the 14th amendment."

In this same decision it was noted that after monitoring an average of 100,000 patients a month for 20 months, only one incident of a patient having received controlled drugs from more than one physician had occurred. The court commented, "The diminution of a constitutionally guaranteed freedom is too great a price to pay for such a small government yield." We wholeheartedly agree.

The argument that the Department would be doing more than it did under the old regulation, which under federal law required pharmacists to keep controlled prescriptions on file and open for inspection, was felt to be false.

They also point out, and we would emphasize, that this method would not be of aid in preventing access of ad-

dicts to prescription. They obviously would not use the same name twice in going from doctor to doctor.

We oppose any manipulation of data beyond the federally required pharmacists controlled prescription file. Specifically, we oppose any form of centralized record keeping of controlled drug prescriptions.

We oppose the Triplicate Prescription regulation because it would be a presently unconstitutional violation of the 14th amendment, a gross invasion of privacy. We oppose it because it has been proven to be completely inefficient.

We are aware that Rhode Island is in another circuit, but we have strong reason to believe that if this regulation were challenged in the circuit the results would be the same. If this direction is implemented, the Rhode Island Medical Society intends to test this hypothesis.

Respectfully submitted,
JOHN E. FARLEY, JR., M.D.
Chairman, R. I. Medical Society
Drug Abuse Committee

SECRETARY'S REPORT

(Continued from page 1)

New Chairman for Mediation Committee

The Council approved of the appointment of Dr. John Ham (1984) as the new Chairman of the Mediation Committee and Drs. Stephen J. Hoffman (1985) and Melvin D. Hoffman (1986) to fill vacancies on the committee.

Commendation of JUA Board Members

The Council commended the RIMS representative to the JUA Board of Directors, Drs. Kenneth Liffman, E. Gerald Rock and Frank W. Sullivan, for their tremendous job in representing the medical profession in this important work.

Commendation of Governor's Commission Members

The Council commended the RIMS representatives on the Governor's Commission on Malpractice, Doctors David Barry, Leroy Chapnick, Anthony Merlino, President Stephen Hoyer and President-Elect Herbert Hager.

President Announces Appointed Committees

ING COMMITTEE

ymond Moffitt, M.D., Chrm.
 oseph Pesare, M.D.
 ph G. McWilliams, M.D.
 liam E. Reeves, M.D.
 rk A. Yessian, M.D.
 hard Kraemer, M.D.
 Lloyd Lagerquist, M.D.
 redo C. Cassiet, M.D.
 bert Holdsworth, M.D.
 ry Garber, M.D.
 hael S. Barrett, M.D.
 annes Virks, M.D.

ohn J. Richman, M.D.
 er T. Gale, M.D.
 no Franek, M.D.

COHOLISM COMMITTEE

well D. Johnson, M.D., Chrm.
 und Billings, M.D.
 rles Charon, M.D.
 Cok, M.D.

aham Heller, M.D.
 ald F. Larkin, M.D.
 E. Murphy, M.D.
 han Sonkin, M.D.
 ard T. McDermott, M.D.
 nmie Mayfield, M.D.
 rles Goodman, M.D.

PH DIAMOND COMMITTEE

ph DiMase, M.D.

LIED HEALTH PROFESSIONS

ND SERVICES COMMITTEE

erge F. Meissner, M.D., Chrm.
 urice Adelman, M.D.
 ert Baute, M.D.
 ur Geltzer, M.D.
 id Hallmann, M.D.
 ph Hansagi, M.D.
 bert Lichtman, M.D.
 ert V. Lewis, M.D.
 rles Millard, M.D.
 old Woodcome, M.D.

OOD BANK COMMITTEE

ld Dahlquist, M.D., Chrm.
 atore Allegra, M.D.

urice Albala, M.D.
 ph A. Chazan, M.D.
 vin A. Chernow, M.D.
 oy S. Chapnick, M.D.
 el Diamond, M.D.
 ph Hansagi, M.D.
 bert Lichtman, M.D.
 ry T. Randall, M.D.
 liam R. Thompson, M.D.
 mas Micolonihi, M.D.

CANCER COMMITTEE

George Coleman, M.D., Chrm.
 Martin Felder, M.D.
 Herbert Fanger, M.D.
 J. Merrill Gibson, M.D.
 David Hallmann, M.D.
 Louis Leone, M.D.
 Henry McDuff, M.D.
 J. Douglas Nisbet, M.D.
 Thomas Perry, M.D.
 Fred Vohr, M.D.
 Banice Webber, M.D.

CHILD-SCHOOL HEALTH COMMITTEE

Betty Mathieu, M.D., Chairperson
 Jay Orson, M.D.

John T. Barrett, M.D.
 James F. Brown, M.D.
 John E. Farley, Jr., M.D.
 Frank Giunta, M.D.
 Hector Jaso, M.D.

Herman B. Marks, M.D.
 William McDermott, M.D.
 John B. Montgomery, M.D.
 Wilson F. Utter, M.D.
 F. Edward Yazbak, M.D.

Kenneth Ainley, Ph.D.
 Richard P. Sexton, M.D.
 Gunnar Nirk, M.D.

Maurice Laufer, M.D.
 Eric Denhoff, M.D.
 Alexander Jaworski, M.D.
 H. Raymond McKendall, M.D.

CONTINUING MEDICAL

EDUCATION

Howard S. Browne, Jr., M.D., Chrm.
 Bertram H. Buxton, Jr., M.D.
 Frederick Eckel, M.D.
 William J. H. Fischer, M.D.
 Russell P. Hager, M.D.

Milton W. Hamolsky, M.D.
 Robert Hopkins, M.D.
 Francis Lamb, M.D.
 Patrick Levesque, M.D.
 J. Jerry Rodos, M.D.

Kenneth L. Smith, D.O.
 John J. Walsh, Jr., M.D.
 Alex M. Burgess, Jr., M.D.
 Robert P. Sarni, M.D.

Mr. Gerald McClure
 Demmie Mayfield, M.D.
 Mr. David Talbot

COMMITTEE ON THE DELIVERY OF MEDICAL CARE

Joseph E. Caruolo, M.D., Chrm.

Robert E. Baute, M.D.
 R. F. Corrente, M.D.
 Frederick Eckel, M.D.
 John P. Grady, M.D.
 Thomas F. Head, M.D.
 Charles A. Hall, Jr., M.D.
 Rudolf A. Jaworski, M.D.
 Patrick R. Levesque, M.D.
 Charles E. Millard, M.D.
 Stanley D. Simon, M.D.
 Charles P. Shoemaker, M.D.

COMMITTEE ON DRUG ABUSE

John E. Farley, Jr., M.D., Chrm.
 Eliot B. Barron, M.D.
 Robert S. Burroughs, M.D.
 Oscar Dashef, M.D.

Joseph E. Donahue, M.D.
 Henry B. Freye, M.D.
 Charles Goodman, M.D.
 Martin J. O'Brien, M.D.
 William L. Mauran, M.D.
 Pietro Russo, M.D.

Ezra Sharp, M.D.
 Allan R. G. Wallace, M.D.

EMERGENCY MEDICAL SERVICES

Robert L. Conrad, M.D., Chrm.
 Richard Bertini, M.D.
 Hayes Cluxton, M.D.
 Joseph J. Delfino, M.D.
 Wilfred V. Ethier, M.D.
 William F. Garrahan, M.D.

Joseph S. Karas, M.D.
 Francis D. Lamb, M.D.
 Henry Litchman, M.D.
 George VanPetten, M.D.

Arnold Porter, M.D.
 John J. Walsh, M.D.

HIGHWAY SAFETY

COMMITTEE

Brian A. Dorman, M.D., Chrm.
 Thomas McOsker, M.D.
 Robert Baute, M.D.
 Anthony Migliaccio, M.D.
 Thomas Nestor, M.D.
 Dugald Munro, M.D.
 John A. Dillon, M.D.
 John C. Baxter, M.D.
 Elmer T. Gale, M.D.

LIAISON COMMITTEE

WITH BROWN

Richard P. Sexton, M.D., Chrm.
 James F. Valicenti, M.D.
 Thomas Head, M.D.

(Continued on page 4)

William J. MacDonald, M.D.

Paul B. Metcalf, M.D.

Charles B. Round, M.D.

MATERNAL HEALTH COMMITTEE

Stanley D. Davies, M.D., Chrm.

George Anderson, M.D.

Harold Beddoe, M.D.

J. Kenneth Beezer, M.D.

Bertram H. Buxton, Jr., M.D.

John E. Carey, M.D.

Herbert Ebner, M.D.

John R. Evrard, M.D.

William J. MacDonald, M.D.

Joseph J. O'Neill, M.D.

William A. Reid, M.D.

Alvin G. Gendreau, M.D.

John P. Wood, M.D.

Ronald Ricco, M.D.

William Q. Sturner, M.D.

MEDICAL ASPECTS OF SPORTS

A. A. Savastano, M.D., Chrm.

F. Bruno Agnelli, M.D.

Warren W. Francis, M.D.

Louis A. Fuchs, M.D.

Kenneth G. Knowles, M.D.

Edwin J. Madden, M.D.

Richard E. Murphy, M.D.

Ralph F. Pike, M.D.

John B. Thayer, Jr., M.D.

MEDICAL-LEGAL COMMITTEE

Edward Spindell, M.D., Chrm.

Stephen J. Fortunato, M.D.

William F. Garrahan, M.D.

John R. Grady, M.D.

Raul Nodarse, M.D.

Leonard Stuadinger, M.D.

Marshall Taylor, M.D.

Paul T. Welch, M.D.

MENTAL HEALTH COMMITTEE

Hugo Taussig, M.D., Chrm.

E. N. Beltran, M.D.

Antonio Capone, M.D.

Domenic Coppolino, M.D.

Ben Feather, M.D.

Bruno Franek, M.D.

Charles Goodman, M.D.

Hector Jaso, M.D.

Gabriel Najera, M.D.

Gunnar Nirk, M.D.

Louis Sorrentino, M.D.

Elliot B. Urdang, M.D.

Joseph M. Zucker, M.D.

Max Faintych, M.D.

D. Robert Fowler, M.D.

Michael Ingall, M.D.

Thomas L. Greason, M.D.

Abraham Heller, M.D.

NURSING COMMITTEE

Maurice Adelman, M.D., Chrm.

John A. Dillon, M.D.

A. S. Carvalho, M.D.

Thomas F. Head, M.D.

Robert M. Lord, M.D.

Betty B. Mathieu, M.D.

Robert W. Riemer, M.D.

Jeannette Vidal, M.D.

Conrad Wesselhoeft, M.D.

Harold Woodcome, M.D.

PEER REVIEW COMMITTEE

Alton M. Paull, M.D., Chrm. (1977)

Robert W. Drew, M.D. (1976)

William F. Garrahan, M.D. (1975)

Patrick R. Levesque, M.D. (1975)

Frank J. Logler, M.D. (1975)

Frank Merlino, M.D. (1975)

John J. Walsh, M.D. (1976)

Martin Felder, M.D. (1977)

Charles L. Hill, M.D. (1977)

PERINATAL COMMITTEE

William Oh, M.D., Co-Chrm.

Bertram H. Buxton, Jr., M.D.,

Co-Chrm.

Leo Stern, M.D., Co-Chrm.

Lorand Brown, M.D.

George Anderson, M.D.

Robert D. Corwin, M.D.

Charlotte T. Liu, M.D.

Frank DeLuca, M.D.

Constantine Demopoulos, M.D.

Eric Denhoff, M.D.

Herbert Ebner, M.D.

John R. Evrard, M.D.

Betty Vohr, M.D.

Alvin Gendreau, M.D.

John P. Grady, M.D.

William McDermott, M.D.

Allen J. Rosenberg, M.D.

Joseph J. O'Neill, M.D.

Patricia N. Wold, M.D.

F. Edward Yazbak, M.D.

Nalin Nanyakares, M.D.

Edwin M. Gold, M.D.

William Sturner, M.D.

POLLUTION COMMITTEE

Francis Scola, M.D., Chrm.

Orlando Armada, M.D.

Peter Baute, M.D.

George K. Boyd, M.D.

Francis H. Chafee, M.D.

Manuel DaSilva, M.D.

Henry Freye, M.D.

Charles A. Hall, M.D.

Marvin Kerzner, M.D.

Gordon Menzies, M.D.

Anthony J. Migliaccio, M.D.

Alton M. Paull, M.D.

George J. Jacewicz, M.D.

Richard W. Perry, M.D.

Thomas G. Breslin, M.D.

Guy A. Settipane, M.D.

Francis P. Vose, M.D.

Joseph P. Padayhag, M.D.

PHYSICIANS AND CARRIERS WORKMEN'S COMPENSATION COMMITTEE

Walter Cotter, M.D., Chrm.

Eugene Healey, M.D.

Henry Litchman, M.D.

Martin Feldman, M.D.

Howard S. Sturim, M.D.

John Yashar, M.D.

SCIENCE FAIR COMMITTEE

John C. Lathrop, M.D., Chrm.

Daniel Alves, M.D.

Thomas G. Breslin, M.D.

Roger Fontaine, M.D.

Karl F. Stephens, M.D.

SOCIAL WELFARE COMMITTEE

Peter L. Mathieu, Jr., M.D., Chrm.

Orlando Armada, M.D.

Andrew Blazar, M.D.

R. E. DeForest, M.D.

John A. Dillon, M.D.

Joseph L. Dowling, M.D.

Martin Feldman, M.D.

Donald Fitzpatrick, M.D.

Russell P. Hager, M.D.

Henry F. Izeman, M.D.

John A. Melchionna, M.D.

John B. Montgomery, M.D.

SECRETARY'S REPORT

(Continued from page 2)

The Council approved part-time employment for our Librarian, M. Helen DeJong, for five months beyond her retirement on October 31 in order that she may complete her important work on rare books, archives and instrument collection.

Approval was given of the expenditure of \$8,000 to hire an additional secretary and upgrade a part-time employee to full-time status.

Membership Poll

The Council approved of a poll of the membership on questions relating to the future status of the RHODE ISLAND MEDICAL JOURNAL and the Rhode Island Medical Society Library.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

CONTINUING MEDICAL EDUCATION CALENDAR

NOVEMBER

- 5 Twelfth Annual Maurice N. Kay Pediatric Symposium, ADVANCES IN PEDI-
ATRIC DIAGNOSIS AND TREATMENT. Kay Auditorium, Roger Williams Gen-
eral Hospital, 9:30 A.M. to 5:00 P.M.
- 6 BEHAVIORAL ASSESSMENT AND TREATMENT OF ALCOHOLICS: A CLINICAL
PERSPECTIVE. Peter E. Nathan, Ph.D., Professor of Psychiatry and Psychol-
ogy, Rutgers University Medical School. A Butler Hospital Grand Rounds
Program (\$1.00 admission will be charged at the door for those who did
not subscribe). Butler Hospital, Ray Hall, 4:30-6:00 P.M.
- 10 May 24 — AMBULATORY MEDICINE AND FAMILY PRACTICE. A weekly class
held Mondays from 7:00-8:30 P.M. The Memorial Hospital, Pawtucket. Cred-
its toward the AMA Physicians Award have been applied for and will
probably be available.
- 13 BEHAVIORAL TREATMENT OF MARITAL PROBLEMS. Richard B. Stuart, DSW,
Director, Marriage and Family Treatment Center, University of British Co-
lumbia, Vancouver, BC. A Butler Hospital Grand Rounds Program — see
November 6 listing.
- 22 HEMATOLOGIC PROBLEMS IN SURGERY. The Brown University Section of
Surgery Symposium. The George Auditorium, Rhode Island Hospital, 8:30
A.M.-Noon. Topics will include: "Recent Advances in the Prevention and
Management of Thromboembolism," "Surgery in the Myeloproliferative Dis-
eases," "Disorders of the Blood Platelet: A Frequent Cause of Excessive Post-
Operative Hemorrhage," "Disseminated Intra-Vascular Coagulation." Speak-
ers are: Robert I. Handin, M.D., Assistant Professor of Medicine, Harvard
Medical School; Peter H. Levine, M.D., Assistant Professor of Medicine, Tufts
University School of Medicine; Seymour I. Schwartz, M.D., Professor of Sur-
gery, University of Rochester; and Sol Sherry, M.D., Professor and Chairman,
Department of Medicine, Temple University School of Medicine.

DECEMBER

- 12 MANIFESTATIONS OF ENDOCRINE DISORDERS IN THE NEWBORN. John F.
Crigler, Jr., M.D., Associate Professor of Pediatrics, Harvard University. Kay
Auditorium, Roger Williams General Hospital, 10:30 A.M.





BROWN UNIVERSITY
DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES
Providence, Rhode Island 02912
863-3231

A Message from the Dean

THE BROWN MEDICAL STUDENT AND THE RHODE ISLAND COMMUNITY

From its inception as a medical school some three years ago, Brown University has received support from and has been responsive to, the general community of Rhode Island. This sense of community alliance is deeply shared by the Brown medical students; indeed, the Medical Student Council has declared that the Brown Medical School "has a special responsibility to devote itself to the improvement of health care and its delivery for the people of Rhode Island." In furtherance of this our medical students have recently initiated steps leading to the establishment of a hypertension screening program for high risk areas in the state of Rhode Island.

In June of this year Mr. James Guanci, one of the officers of the Medical Student Council, contacted some program coordinators of the Rhode Island Heart Association for advice and guidance regarding a contemplated hypertension screening program. After numerous organizational meetings involving students, practicing physicians and representatives of the Heart Association and the community, it was mutually decided that the first efforts in this direction might best be undertaken with Opportunities Industrialization Center (OIC) of South Providence. In concert with various local physicians, Mr. Michael van Leeston (Director of OIC), Mr. Robert Sauber, and Mrs. Patricia Sherman of the Rhode Island Heart Association, a detailed program was designed which emphasized patient education as well as screening.

The first screening effort was begun on August 12, 1975, based upon the volunteer services of 33 Brown University medical students. Preliminary lectures, prepared and rendered by the students, explained the nature of high blood pressure and the various complications which might arise following

sustained hypertension. These formal educational sessions were frequently augmented by films and printed material prepared by the Rhode Island Heart Association. Following questions and answers, the screening was begun. When the medical students encountered a person with hypertension (as defined by age-related Heart Association criteria), he or she was asked to return at another date in order to verify the existence of hypertension. If confirmed, the person was then referred to his or her personal physician. When no personal physician was identified, the patient was referred to one of the neighborhood health centers. Almost 11 per cent of the first 177 individuals screened showed hypertension.

The medical student leadership plans to maintain a hypertension screening unit at OIC and will attempt to initiate a similar program on the Brown campus in cooperation with the University Student Health Service. Medical students have established a standing Committee on Community Relations which will serve to coordinate these screening efforts. Some of the participating students have expressed an interest in having community-oriented programs of this nature incorporated into the curriculum of the Community Health clerkship at the medical school. Members of the student body are presently considering still further means and programs by which students may participate in community life.

Our medical students fully recognize the limitations of their clinical judgment and capabilities. They have weighed the ramifications of each of their actions and have sought competent professional advice at each stage in the development of this program.

(Continued on next page)

The Brown medical students represent a valuable community resource. When a strike impaired the functioning capabilities of the Rhode Island Medical Center over a year ago, in excess of 180 Brown medical students volunteered their services to maintain the wards until the labor problem was resolved. In actions such as these our students show an

awareness that the gifted physician is one who combines technical skills with compassion and authentic commitment to the community.

STANLEY M. ARONSON, M.D.
Dean of Medical Affairs
Brown University



The Twelfth Annual Maurice N. Kay Pediatric Symposium

NOVEMBER 5, 1975

At the Roger Williams General Hospital

"Advances in Pediatric Diagnosis and Therapy"

Moderator — DOCTOR STERN

Registration and Coffee Hour 9:00 A.M. to 10:00 A.M.

Morning Session 10:00 A.M. to 1:00 P.M.

10:00 a.m. "Practical Identification of Immunologic Disorders in Children" DR. FULGINITI

11:00 a.m. "Slow Virus Infections in Children" DR. GRIFFITH

12:00 p.m. Panel Discussion: Dr. Vincent Fulginiti, Dr. John Griffith, Dr. Stephen Kaplan, Dr. Georges Peter

Luncheon — Hospital Cafeteria 1:00 P.M. to 2:00 P.M.

Afternoon Session 2:00 P.M. to 5:00 P.M.

2:00 p.m. "Growth Hormone, Somatomedin, and Growth" DR. VAN WYK

3:00 p.m. "Nephrotic Syndrome" DR. MICHAEL

4:00 p.m. Panel Discussion: Dr. Judson Van Wyk, Dr. Alfred Michael, Dr. Mary Arnold, Dr. Robert Schwartz

President's Page

In This State, It's Safer And Cheaper To Steal Cars Than To Practice Medicine!!

By Stephen J. Hoyer, M.D.

The irony of these two cases, ten days apart, speaks more eloquently than any editorial possibly could. Suspended sentences for car theft and two weeks of suspenseful jury trial for practicing good medicine!! Don't you agree?!

DOCTORS CLEARED IN \$1.5 MILLION MALPRACTICE SUIT

By FRANCIS L. MURPHY
Journal-Bulletin Staff Writer

PROVIDENCE — A jury and a trial judge, acting independently, recorded verdicts in Superior Court yesterday in favor of two physicians, each of whom was sued for \$750,000 in a medical malpractice case.

Dr. Stephen J. Hoyer and Dr. Paul J. M. Healey, both of Pawtucket, were the defendants in the suit brought by Omer G. Benoit, 35, of 825 Central Ave., Pawtucket. He complained that their failure to diagnose the seriousness of an abdominal condition from which he suffered in 1970 made it necessary for him to undergo major surgery in a later hospitalization.

Dr. Hoyer is the president of the Rhode Island Medical Society.

The jury returned verdicts for the two doctors after deliberating about nine hours Wednesday and yesterday. Judge Ronald R. Laguerre thereupon also granted motions by Kirk Hanson, attorney for the doctors, that he direct verdicts in favor of them. The judge had reserved his decision on Hanson's motions until the jury's own verdicts could be returned.

Judge Laguerre said there was no evidence from which the jurors could reasonably find that any alleged failure by the doctors to diagnose the seriousness of Benoit's abdominal condition was a "proximate cause" of his subsequent need for major surgery.

The judge said that, on the contrary, there was indisputable evidence that Benoit was suffering from an acute condition and that the ultimate outcome was inevitable.

The doctors denied Benoit's allegation that they mis-diagnosed his condition. Their counsel contended that the case should not be determined by "what hindsight may reveal should have been done in the light of subsequently occurring conditions."

Benoit was represented by Claude Lefebvre.

*Reprinted from the Providence Journal of October 10, 1975.

2 FINED IN STOLEN CAR CASE

By TONY ALLEN
Journal-Bulletin Staff Writer

PROVIDENCE — The kingpin in a northern Rhode Island stolen car ring and one of his accomplices were fined in federal court yesterday.

They are the last of six men sentenced in a stolen car operation in which 14 cars were stolen from Massachusetts car dealers. In all cases, federal officials said, the cars were stolen within a day or two after they had been taken for a test drive by men presumed to be potential customers.

It was theorized that car keys were duplicated during the time the cars were out on road tests. But since all six men pleaded guilty and the cases, therefore, never went to trial, there was no testimony to this effect.

In yesterday's sentencing, Oscar Theriault, 32, of 174 Burnside St., Woonsocket, described in federal court as the "moving factor" in the stolen car operation, was given a 15-month suspended sentence, with probation, and fined \$2,500.

Chief Judge Raymond J. Pettine gave Theriault one week to pay the fine despite the convicted man's claim that he'd have to sell his house to do it. The judge, however, held out the possibility for installment payments if the court should later deem it necessary.

The accomplice, Ronald Vaz, 31, formerly of Blackstone, Mass., now living at 74 Hollis St., Woonsocket, was given a six-month suspended sentence and fined \$200. The judge noted that Vaz is more than \$13,000 in debt.

Vaz apologized to the judge for collapsing last week in the courtroom, thus forcing postponement of sentencing until yesterday. Neither Vaz nor Theriault has been convicted before, the U.S. Attorney's office said.

Four other men connected with the car ring already have received six-month suspended terms with probation and fines of varying amounts.

*Reprinted from the Evening Bulletin of October 21, 1975.

Profile "20"

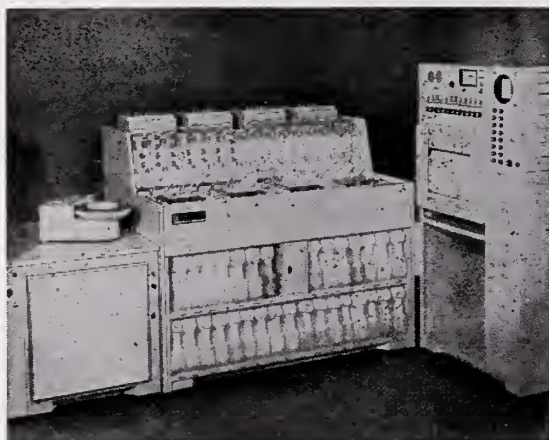
Results in Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES

\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph., D

DONALD MATTERA
B.S. M.T. (ASCP)

NOTICE

ALL PHYSICIANS IN RHODE ISLAND!!

CHANGING ECONOMIC CONDITIONS,
INCREASING LOSS RATIOS
and

INSUFFICIENT PREMIUM RESERVES ARE BEGINNING TO BRING ABOUT DRASTIC CHANGES

in

NATIONAL AND REGIONAL
ASSOCIATION GROUP DISABILITY
INCOME POLICIES!!

Those Members who would like further information of the impending problems of "Mail-Order" Insurance which lie just ahead may obtain further information by contacting us via 'phone or mail.

— NO OBLIGATION —

R. A. DESROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

HEALTH HAVENS

**A SKILLED NURSING HOME
MEDICARE PARTICIPATING**



Registered Professional Nurses On All Shifts
Dietician Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited



Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."¹²

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

**Fire fighter
for arthritic
flare-ups.**

Butazolidin® alka

Each capsule contains:
100 mg phenylbutazone USP
100 mg dried aluminum hydroxide gel USP
150 mg magnesium trisilicate USP

If it doesn't work in a week, forget it.
Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. B. edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasias), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpre-

dictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemeses, dys-

pepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardley, New York 10502

BU 10259

MAL- PRACTICE QUESTIONS ???

**Depend on
Starkweather & Shepley
for the answers
and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.

ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

155 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900



LEARY LABORATORY

EKG: This service is now available by appointment on house calls and at our 189 Governor St. Laboratory.

Profile 11: A new inexpensive grouping of the procedures that physicians in this area frequently order to obtain a general profile of their patients, without appointment. The fee is \$16.50 which includes the following tests:

Albumin	Alk. Phos.
Glucose	Cholesterol
BUN	Uric Acid
Calcium	Total Protein
LDH	Total Bilirubin
SGOT	Phosphate
Triglycerides	
T4	
Hemogram	
(RBC, WBC, Hematocrit,	
Hemoglobin, MCV, MCH, MCHC)	

LEARY LABORATORY, INC.
43 Bay State Road, Boston, MA 02215

THREE PROVIDENCE LOCATIONS

655 Broad St. — 7:30-5:00 Mon.-Fri.
189 Governor St. — 9:00-5:00 Mon.-Fri.
111 Plain St. — 9:00-5:00 Mon.-Fri.
9:00-11:00 Saturday

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

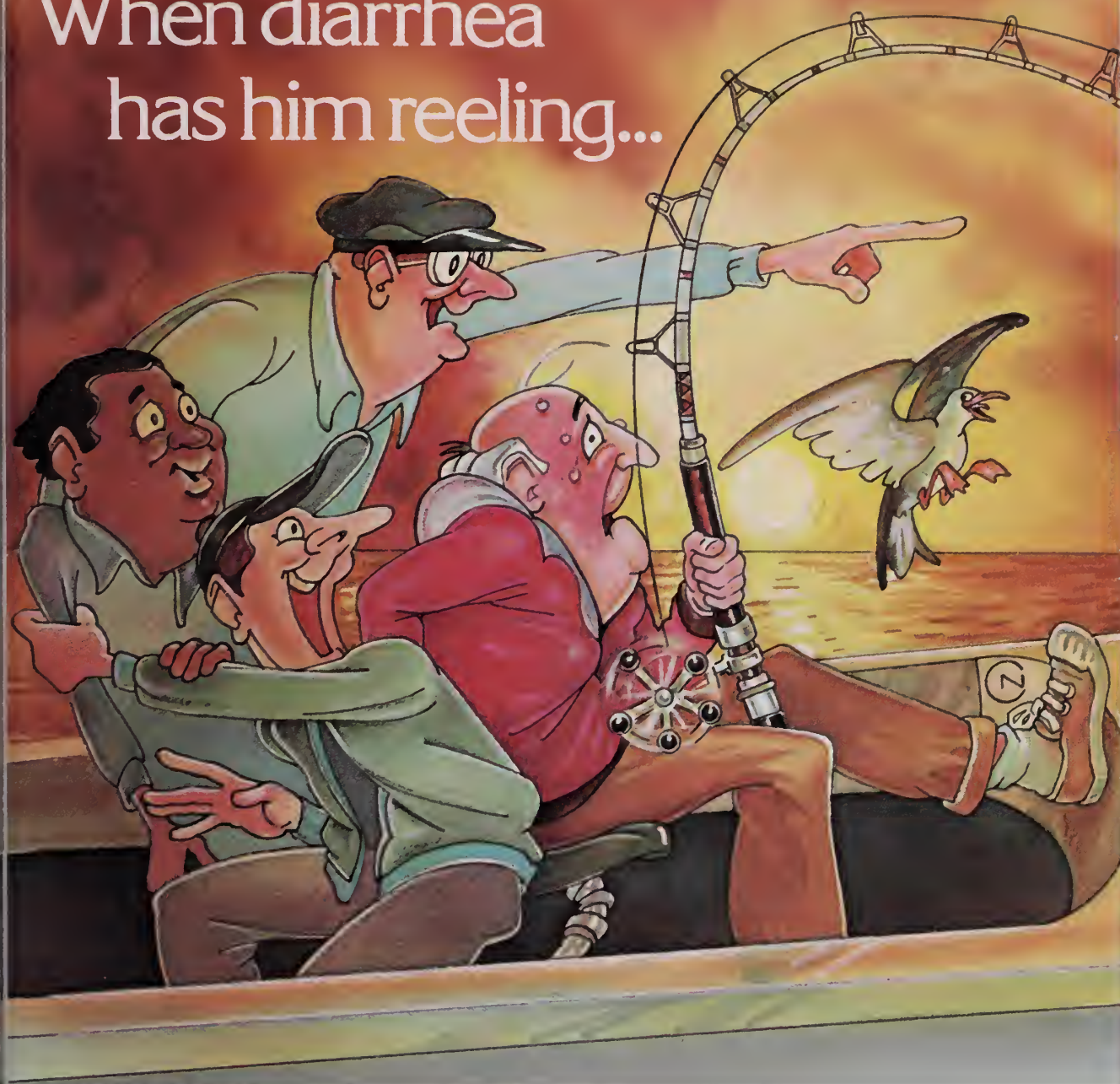
Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

When diarrhea has him reeling...



Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and

fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil[®]

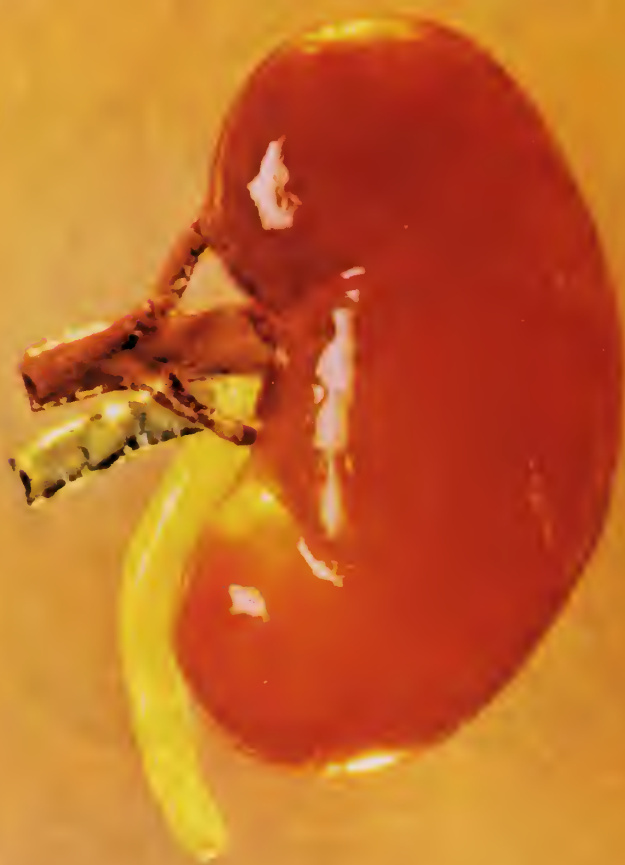
TABLETS LIQUID

holds the line.

Each tablet and each 5 ml of liquid contain: diphenoxylate hydrochloride 2.5 mg (Warning: May be habit forming), atropine sulfate 0.025 mg

In hypertension,

ALDOMET[®] (METHYLDOPA|MSD)
usually offers more
than effective lowering
of blood pressure...



**With ALDOMET
(Methyldopa, MSD),
existing renal function
is usually unchanged**

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.



**With ALDOMET
(Methyldopa, MSD),
cardiac output is
generally unchanged**

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.

MSD
MERCK
SHARP
DOHME

addendum

With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure.
Less frequent symptomatic postural hypotension is experienced
with ALDOMET than with many other antihypertensive agents.
Exercise hypotension and diurnal blood pressure variations
rarely occur.

for hypertension

TABLETS, 250 mg, 500 mg, and 125 mg

ALDOMET®

(METHYLDOPA|MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease,
hypersensitivity to the drug, and if previous methyldopa
therapy has been associated with liver disorders. It is
not recommended in pheochromocytoma.
It is important to recognize that a positive Coombs test,
hemolytic anemia, and liver disorders may occur with
methyldopa therapy. The rare occurrences of hemolytic anemia
or liver disorders could lead to potentially fatal complica-
tions unless properly recognized and managed. For more
details see the brief summary of prescribing information.

or a brief summary of prescribing information, please see following page.

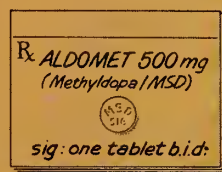
to further
simplify therapy
for many patients

now available
ALDOMET® 500 mg
(METHYLDOPA|MSD)

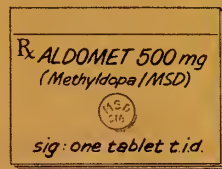
- often more practical to prescribe
- easier for patients to remember

Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day. Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

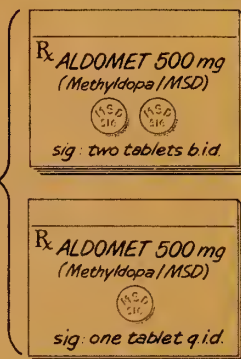
1.0-g
daily
dose =



1.5-g
daily
dose =



2.0-g
daily
dose =



NOTE: Tablets shown are not actual size.

MSD
MERCK
SHARP
DOHME

in hypertension

ALDOMET[®] (METHYLDOPA/MSD)

usually lowers blood pressure effectively



Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or

cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reaction or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by dialysis procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychosis or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease in blood pressure on standing). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatulence, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia, leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, skin rash.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensive other than thiazides. Tolerance may occur, usually between second and third month of therapy. Increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. In older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

Pretend it's 1958. Would you invest in hula hoops?



If you put \$100,000 into hula hoops in 1958, you might be a millionaire today.

Then again, you might be broke.

In making short-term investment decisions, timing is crucial. And the results of such decisions become obvious almost overnight.

But while short-term results are interesting, they're only the beginning. It's how your original investment stacks up ten, fifteen, twenty years later that ultimately counts.

At Industrial National Bank, we've been investing funds for individuals and corporations for decades, and we've seen investment fads come and go. During that time, we've invested our clients' funds wherever imagination, professional

judgment and thorough research indicated we should.

We think our philosophy has paid off — with consistent, strong long-term performance. We're proud enough of our long-term record that we take a back seat to no one in the business of professional financial management.

In fact, we'd like to discuss that record with you, and to show you how our combination of the right people, the right philosophy, and the right organization can bring a realistic new performance orientation to the management of your investments.

Call Mr. Evans at 278-6607. Trust Department, Industrial National Bank, 100 Westminster Street, Providence, Rhode Island 02903.

IN BANK
Industrial National Bank

Something extra in Investment Management.



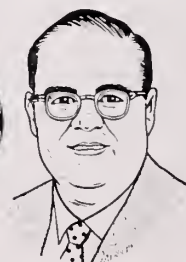
R_x for OVERWORKED DOCTORS

It would be rare indeed to find a physician who doesn't put in long, tiring hours, working in the area of death vs. life. Add to that, the years spent in earning your M.D., the untold hours of post-graduate study and the nights perusing medical literature to keep abreast of the latest developments in your fast-changing profession.

Surely, you deserve something beyond the satisfaction of doing your job well. Suggestion: investigate the pleasures of owning "The Perfect Car". We, too, have spent years in perfecting our techniques of delivering to our customers cars that have been gone over with a fine-tooth comb. We "fit" it. Every "bug" has been

taken out, and we test-drive the car for 200 miles **before** delivery, thus guaranteeing you'll avoid the aggravation of squeaks, rattles, leaks, mechanical problems and just about anything which could create dissatisfaction. We call it the Tasca ABC Plan. It's a major development in satisfying customers.

Combine the Tasca ABC Plan with great cars to start with, — Lincoln Continental, Mark IV, or the new Mercury Monarch, and you're well on your way to relief from the tension which comes from doing your job so conscientiously. You deserve The Perfect Car, — from Tasca. No appointment necessary.



Famous Fighters



JOHN L. SULLIVAN
Bare-knuckles heavyweight champion
1882-1892

NEOSPORIN® Ointment (polymyxin B-bacitracin-neomycin) is a famous fighter, too.

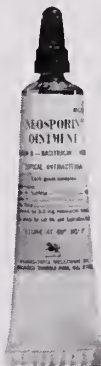
Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) oil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to



neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Fiske Fund Prize Dissertation 1975

The Trustees of the Fiske Fund of The Rhode Island Medical Society announce the following for the Prize Dissertation of 1975:

Rhode Island Medicine in the American Revolution

For the best essay on the subject worthy of a premium they offer a prize of \$1,000. The dissertation will be particularly graded on the basis of original work by the author. The competition is not restricted to physicians. Each competitor for the premium is expected to conform with the following regulations:

To forward to the secretary of the Trustees on or before the fifteenth day of December, 1975, free of all expense, *a copy of his dissertation with a motto thereon, and also accompanying it a sealed envelope bearing the same motto inscribed on the outside with his name and address within.* The author's name should *not* appear on the title page of the manuscript.

Previous to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title and interest in and to the same, for the use, benefit, and advantage of the Fiske Fund.

Dissertations, other than the successful ones, will be returned to the authors.

The dissertations must be typewritten, double spaced on standard typewriter paper and should not exceed 10,000 words.

TRUSTEES, CALEB FISKE FUND RHODE ISLAND MEDICAL SOCIETY

Secretary

Mrs. Helen E. DeJong
106 Francis Street
Providence, Rhode Island 02903

Stephen J. Hoye, M.D.
Herbert F. Hager, M.D.
Philip J. Morrison, M.D.

"Kid, this stuff is the bananas."



Experts agree: when it comes to good-tasting banana flavor—without the unpleasant taste of paregoric—the makers of Donnagel®-PG really know their stuff!

For diarrhea Donnagel®-PG

Donnagel with paregoric equivalent

Each 30 cc. contains:

Kaolin	6.0 g.
Pectin	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine	
hydrobromide	0.0065 mg.
Powdered opium, USP	24.0 mg.
(equivalent to paregoric 6 ml.)	
(warning: may be habit forming)	
Sodium benzoate	60.0 mg.
(preservative)	
Alcohol, 5%	

Now with child-proof closure

A·H·ROBINS

A. H. Robins Company
Richmond, Virginia 23220

IN COUGHS
OF COLDS,
'FLU' AND U.R.I.
CLEAR
THE
TRACT
WITH THE
ROBITUSSIN[®]
LINE



THE 5 RELIABLE ROBITUSSINS can really help clear the respiratory tract. All contain guaifenesin,* the expectorant that works systematically to help stimulate the output of lower respiratory tract fluid. This enhanced flow of less viscid secretions promotes ciliary action and makes thick, inspissated mucus less viscid and easier to raise.

*formerly named Glyceryl Guaiacolate

For productive and unproductive coughs

ROBITUSSIN®

Each 5 ml teaspoonful contains:

Guaifenesin, NF. 100 mg
Alcohol, 3.5%

For severe coughs

ROBITUSSIN A-C®

Each 5 ml teaspoonful contains:

Guaifenesin, NF. 100 mg
Codeine Phosphate, USP. 10.0 mg
(warning: may be habit forming)
Alcohol, 3.5%

Non narcotic for 6-8-hr. cough control

ROBITUSSIN-DM®

Each 5 ml teaspoonful contains:

Guaifenesin, NF. 100 mg
Dextromethorphan Hydrobromide, NF. 15 mg
Alcohol, 1.4%

Decongests nasal passages and sinus openings as it helps relieve coughs

ROBITUSSIN-PE®

Each 5 ml teaspoonful contains:

Guaifenesin, NF. 100 mg
Pseudoephedrine** Hydrochloride, NF. 30 mg
Alcohol, 1.4%

**Formerly contained Phenylephrine Hydrochloride 10 mg

Decongestant action helps control cough and clear stuffy nose and sinuses. Non narcotic.

ROBITUSSIN-CF®

Each 5 ml teaspoonful contains:

Guaifenesin, NF. 50 mg
Phenylpropanolamine Hydrochloride, NF. 12.5 mg
Dextromethorphan Hydrobromide, NF. 10 mg
Alcohol, 1.4%

All Robitussin formulations available on your Rx or Recommendation.

A. H. Robins Company, Richmond, Va. 23220 **A·H·ROBINS**

For many years Robins has spotlighted the expectorant action of the Robitussin cough formulations by featuring action photographs of steam engines. In keeping with this tradition, the company recently commissioned a well-known illustrator to render full-color drawings of several classic locomotives... accurate to the minutest detail. The first of the series is now available. To order your print suitable for framing, write "Robitussin Clear-Tract Engine #1" on your Rx pad and mail to "Vintage Locomotives," Dept. T4, A. H. Robins Company, 1407 Cummings Drive, Richmond, Va. 23220.



The William Mason (1856)

easy to take



Keflex®
cephalexin



500733

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Gallstones: Concepts Of Pathogenesis And Treatment

The Liver Is More Significant Than The Gallbladder In The Pathogenesis Of Cholesterol Stones

By Edward A. Iannuccilli, M.D.

Gallstone disease in the United States represents a significant health problem with regard to both its morbidity and mortality. Based on data from the Pima Indian study¹ and extrapolations of data from the Framingham study, it is estimated that approximately 15,000,000 to 20,000,000 Americans have gallstones² and that 500,000 have cholecystectomies yearly, with an annual cost of nearly \$2,000,000,000. For some time the etiology of gallstone disease has been a matter of speculation, with stasis, infection, and bacterial contamination of the biliary tree considered to be the initiating events. There was very little discussion, however, concerning the composition of gallstones or the role of the liver in this regard. Recent data have shown that the gallbladder is not the final common pathway in the pathogenesis of gallstones, but more likely the organ in which a series of abnormal mechanisms culminate.

CHOLESTEROL IN BILE

Approximately 80 per cent of all gallstones are cholesterol stones. In considering the pathogenic mechanisms involved in gallstone disease, one must

EDWARD A. IANNUCILLI, M.D., *Instructor in Medicine, Brown University, Division of Biological and Medical Sciences; Associate Director of Medical Education, Rhode Island Hospital; Department of Gastroenterology, Rhode Island Hospital.*

This is one of a Series of Papers Supported by the Continuing Education Program of the Rhode Island Health Science Education Council.

revert to biochemical analytical studies of bile and to the solubility of cholesterol in bile. Several studies in recent years have increased our understanding of cholesterol solubility in bile, and secondarily our understanding of the disease process itself. Bile is composed of approximately 80 per cent water, 12 per cent bile salts, 4 per cent phospholipids (95 per cent lecithin), 0.7 per cent cholesterol, and small amounts of pigmented bilirubin conjugates.

Cholesterol as a fat soluble substance must be solubilized in this medium to prevent its precipitation. The maximum solubility of cholesterol in bile is increased by two million fold over that in water alone. Exactly how this is done will be the subject of this paper.

Cholesterol is held in solution in bile as a mixed micelle with bile salts and phospholipids. The cholesterol molecule is divided into two physical parts; a water insoluble hydrocarbon end, and a water soluble hydrophilic end. Bile salts are amphiphilic in nature, and as such have an oil soluble and water soluble end. By their water soluble, detergent-like action they can "dissolve" in water by forming a micelle. When cholesterol is mixed with bile salts and lecithin in bile, a mixed micelle is formed, which simply means that the entire micelle, of which cholesterol occupies a central portion, has a reverse hydrophilic (or water-loving) end outside and is completely hydrocarbon or hydrophobic inside. This is the mechanism by which cholesterol is carried in solution.

(Continued on next page)

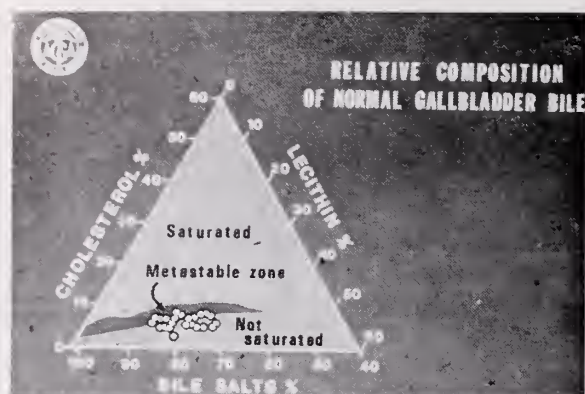


FIGURE 1.

Picture Courtesy of American Gastroenterology Assn.

It has been shown recently that individuals with gallstone disease have bile that is supersaturated with cholesterol,³ and commonly referred to as lithogenic. This supersaturated bile is likely a result of an alteration in bile metabolism which leads to a relative decrease in bile salts in relation to cholesterol. It is now suspected that this defect resides within the liver. These relatively recently revealed facts have obvious implications in the therapy of cholesterol gallstone disease.

The bile components can be depicted in the well-known diagram adapted from Admirand and Small,³ in which the interrelationship of the three biliary lipid components (bile salts, cholesterol, and lecithin) are plotted on a triangular phase diagram (see Figure 1). In this manner each bile symbol can be designated by a single point on the graph. This point defines the maximum cholesterol solubility obtained by measuring the component parts of bile salt, lecithin, cholesterol, and water. In one specific geographic area on this diagram, cholesterol is in its micellar or soluble phase. Any plotted point that falls outside of this territory would represent cholesterol in two or more phases, either as the liquid micellar phase or as the cholesterol crystalline phase. There is one point on the graph, referred to as the metastable zone, which is probably representative of the fact that cholesterol exists in both phases, micellar and crystalline, and in which precipitation of excess cholesterol occurs very slowly. Admirand and Small³ plotted a series of specimens of gallbladder bile in patients with and without cholesterol gallstones. The bile of the patients with gallstones was at or above the line of cholesterol saturation, whereas the bile of patients without gallstones was in the micellar zone. Cholesterol stones therefore presumably develop in the gallbladder by an aggregation of cholesterol crys-

tals. This aggregation may be accelerated by bacteria, intestinal contents, abnormal bile pigments, mucoprotein, or foreign bodies, but the exact mechanism is not yet known.

By correlating the biliary lipid composition data with epidemiologic information, a striking relationship between the degree of cholesterol saturation and the incidence of cholesterol gallstones for various populations is revealed. The American Pima Indian has a very high incidence of stones (70 per cent of the women by age 30) and, therefore, a very high cholesterol saturation index.¹ If one were to examine more carefully these young female American Indians, it would be observed that normal bile samples are rather rare, whereas highly supersaturated or lithogenic bile is much more common. This relates to the fact that bile levels are relatively low in cholesterol, and therefore supersaturated. Consequently, individuals with lithogenic bile have a very great propensity to develop cholesterol gallstones. It would also appear that the primary defect in the development of stones is one which begins at an early age.

LITHOGENIC BILE FORMATION

Rather good biochemical data indicate that the liver of patients with cholesterol gallstones is the site of the production of this abnormal bile.^{4,5} This liver derangement may be reflected in the abnormal metabolism of cholesterol, or bile salts, or phospholipids. If one compares the biliary lipid composition of hepatic and gallbladder bile in susceptible individuals, it is observed that bile from both sites contains insoluble cholesterol. Hepatic bile is supersaturated with respect to cholesterol, while gallbladder bile is saturated. As a corollary, it would seem that there is a seeding process within the gallbladder whereby the supersaturated bile results in a conglomeration of the cholesterol crystals to form stones.

Even hepatic bile of normal subjects can be abnormal at certain times. Recent reports indicate that the bile lipid composition varies during the day whereupon it is more supersaturated in the morning and less so after breakfast.⁶ This implies that with rather low bile salt secretion rates, as occur in a fasting state, cholesterol solubility is diminished.

Since decreased biliary secretion of the solubilizing lipids can result in formation of lithogenic bile, examination of the mechanism and control of bile salt secretion is important, because there is a distinct link between the amount of bile salts enter-

ing the liver and the rate of secretion of biliary phospholipid (lecithin) and cholesterol. Bile salts apparently have some stimulatory effect on biliary lipid secretion. Studies by Gregory, Swell and Vlahcevic showed that the micelle consisting of bile salts, lecithin, and cholesterol may be assembled in the microsomes of the liver at a specific site, coupled to a carrier protein, transported to the bile ducts, and eventually excreted into the intestine.⁷ Cholic and chenodeoxycholic, the bile salts, are absorbed from the distal ileum at a very efficient rate and enter the enterohepatic circulation. Synthesis of bile acids homeostatically equals the amount of bile salts which escape absorption. Those bile acids that are not resorbed are subjected to enzymatic action in the colon with the principle products formed being the secondary bile acids, deoxycholic and lithocholic. The total bile acid pool involved in the enterohepatic circulation amounts to approximately two to three grams per day. Since this pool circulates approximately six to eight times per day, up to twenty-five grams of bile acid recirculates. If the liver cannot compensate for the homeostatic bile salt loss, then the bile salt or the bile acid pool is accordingly diminished. Ileal disease is an example wherein much bile acid is lost because it cannot be absorbed. As a result, persons with, for example, regional enteritis and ileal resections have a greater propensity to develop cholesterol gallstones.

The synthesis of bile acids, cholic and chenodeoxycholic, are regulated by the amount of bile acid returning via the enterohepatic circuit, but little is known about how much of a change is necessary in the bile acid pool size or the recirculation mechanism to further control the bile acids synthesis. Since lithogenic bile is a result of a relative deficiency of bile salts, the defect may reside in 1) deficient hepatic bile salt secretion, or 2) defective regulation of bile salt synthesis by circulating bile salts, or 3) impaired intestinal (ileal) absorption of bile salts.

Vlahcevic and others⁸ have shown that individuals with a high incidence of cholesterol gallstones have a deficiency of bile salts, or bile salt pool. This total bile salt pool in patients with stones was about 45 per cent smaller than the bile salt pool in normal subjects. This reduction in bile acid pool has also been observed in male and female American Indians. Further studies have shown that persons with a high incidence of gallstones apparently have a significantly diminished bile salt secretion rate, which is a function of bile acid pool size.

More recent studies have shown that patients with and without gallstones synthesize approximately the same amount of primary bile acids per day. However, it appears that patients with cholesterol gallstones have a greater turnover of both cholic and chenodeoxycholic acids than patients without cholesterol gallstones. Since there is no observed decrease in bile acid synthesis in these susceptible patients, increased bile acid loss from the intestine might be the initiating factor leading to the reduction in bile acid pool size. The loss of bile salts, albeit minimal, would be magnified by the enterohepatic recirculation mechanism of 6 to 8 times per day.

The liver in susceptible individuals may well have a diminished capacity to make bile acids, but this does not seem to be the case in individuals who develop the cholesterol stones. Exactly why is not clear at the moment, but it may be related to a lower level of the p7 Alpha hydroxylase enzyme which is a significant rate regulating enzyme in the synthesis of bile acids.

Based on these facts it would appear that a reduction in the bile acids results in production of lithogenic bile, and that cholesterol and bile acid secretion rates are significantly diminished in susceptible patients. All three predisposing factors, defective hepatic bile salt secretion, defective regulation of bile salt synthesis, or impaired intestinal absorption of bile salts, may well play a role in diminishing the bile salt pool.

THERAPY OF GALLSTONE DISORDERS

Since there is a diminished bile acid pool in patients with cholesterol gallstones, it would seem feasible to administer bile salts or bile acids in an attempt to increase the bile salt pool and reverse the bile composition from lithogenic to normal. This would allow for more solubilization of the cholesterol in the bile phase. In addition, chenodeoxycholic acid has been given to patients with gallstones by Danzinger et al,⁹ who have been able to show dissolution of previously formed stones by giving the chenodeoxycholic acid for a period of nine months.

There are risks to this kind of treatment. In man and monkeys an increase in SGOT and SGPT enzymes has been observed in most cases. However, these transferase enzymes return to normal despite continued therapy with chenodeoxycholic acid. Liver biopsies in man have not shown significant changes despite the fact that hepatic cirrhosis has been described in monkeys. Other effects include di-

(Continued on page 442)

The National Health Planning And Resources Development Act Of 1974

Act Will Coordinate Planning, Regulation, And Development To Promote Economy, Equal Access, And Quality Of Care

By John T. Tierney

Literally during its closing hours, the 93rd Congress passed the National Health Planning and Resources Development Act of 1974. This Act, sent to the President on December 24, 1974, amends the Public Health Service Act "to assure the development of a national health policy and of effective state and area health planning and resources development programs."

Until the last minute on January 4, 1975, when the bill was signed into law by President Ford, Public Law 93-641 had been the target of both energetic support and opposition from the most powerful health lobbying groups in the United States. The Act replaces Comprehensive Health Planning (CHP), Regional Medical Programs (RMP), and Hill-Burton (HB), and combines these functions, placing the majority of health planning in the hands of regional Health Systems Agencies (HSA). The bill, authorizing \$1.013 billion over three years, permits an 18-month transition period for the Health Systems Agencies to absorb the CHP and RMP functions. Priority is given to existing CHP and RMP agencies to become Health Systems Agencies.

JOHN T. TIERNEY is the Deputy Director of Health of the Rhode Island Department of Health. He is also Governor Philip W. Noel's designee for the implementation of The National Health Planning and Resources Development Act of 1974 (P.L. 93-641).

This paper describes the status of the law on July 17, 1975, the time at which it was submitted for publication.

Figure 1 shows a comparison of the health planning committee and agency structure under the current comprehensive health planning concept with the proposed merged health planning and resource development concept.

Figure 1
THE KEY

CURRENT	PROPOSED
State Comprehensive Health Planning Advisory Council	Statewide Health Coordinating Council (SHCC)
State Comprehensive Health Planning Agency The "a" Agency	State Health Planning and Develop. Agency (SHA)
Areawide Comprehensive ¹ Health Planning Agency The "b" Agency	Health Systems Agency

¹Rhode Island does not have an areawide comprehensive health planning (314 b) agency operating under federal law and with federal funds. The Health Planning Council is a voluntary non-profit agency with the purpose of "helping the community make the most effective and imaginative use of its health care resources."

THE HEALTH SERVICE AREAS

The Secretary of Health, Education, and Welfare notified the Governor of each state by February 3, 1975 that health services areas had to be established. While the Governor makes such designations, final approval of the areas is the responsibility of the Secretary. Health planning areas existing under areawide comprehensive health planning (314 b) agencies may be designated if they meet the requirements of the law. Wherever possible, the health services area should be coter-

minous with the areas of Professional Standards Review Organizations (PSRO). The health planning areas, with some exceptions, may not be less than 500,000 persons, nor more than 3,000,000. The Secretary has the authority to waive the lower figure in certain states. The Governors had until May 4, 1975, to designate the health services areas. The Secretary must publish the health services area boundaries in the FEDERAL REGISTER within 210 days of enactment by August 2, 1975.

THE HEALTH SYSTEMS AGENCIES (HSA)

The purposes of the Health Systems Agency are to improve the health of the residents of the health service area; increase the accessibility, acceptability, continuity, and quality of health services provided; restrain increases in the cost of providing health services; and prevent unnecessary duplication of health resources. The Secretary of Health, Education, and Welfare must consult with the Governor of each state in the designation of Health Systems Agencies.

The Health Systems Agencies may be either nonprofit or public bodies. Earlier versions of the bill precluded public bodies from becoming Health Systems Agencies. The governing body of the Health Systems Agency shall not be less than 10, nor more than 30 members. If the governing board has an executive committee, more than 30 members are permitted. The majority of the governing board, but not more than 60 per cent, must be consumers, and the remainder providers, except that elected public officials may be included as part of the consumer or provider count. At least one-third of the governing body must be direct providers of health care, such as physicians, nurses, and dentists. Providers, both direct and indirect, are specifically defined; everyone else is a consumer. There must also be representation for institutions, insurers, schools, and the allied health professions.

It is also required that non-metropolitan area representation equal the proportion of the non-metropolitan population. In planning areas where more than two Veterans Administration health facilities exist, a Veterans Administration representative must be a member of the governing body.

FUNCTIONS OF THE HEALTH SYSTEMS AGENCIES

a. Assemble and analyze data related to all aspects of health, including environmental and occupational needs.

b. Prepare a health systems plan (HSP)

which, when developed, will assure a quality health care delivery system.

c. Prepare an annual implementation plan (AIP) describing the short-term objectives and priorities in terms of specific plans and projects that relate to the goals of the HSP.

d. Implement its HSP and AIP plans.

e. Make grants from the health services development fund to public and private agencies to accomplish the published goals of the plans.

f. Coordinate its activities with the area Professional Standards Review Organization and with other regional and local entities.

g. Review and approve or disapprove applications for Federal funds coming into an area under the provisions of the Public Health Service Act, the community Mental Health Centers Act, the comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act, including formula grants to the states. The Secretary may overturn HSA application disapprovals.

h. Make recommendations to the state agency on the need for new institutional health services in its area.

i. At least every five years the HSA must review existing institutional health services, making recommendations to the state agency as to appropriateness. The initial review of the existing institutional health services must be completed within three years after the HSA comes into existence.

j. The HSA must annually make recommendations to the state agency on projects and their priorities for construction, modernization, and conversion of facilities in the area.

With reference to function (i) this reflects a new and controversial instrument in controlling health care costs. It is referred to as certification and re-certification. The most significant aspect of the criteria used is whether or not the institutional services being evaluated meet a public need.

A Health Systems Agency may establish sub-area advisory councils representing parts of the agency's health service area to advise the governing body of the agency. The law addresses itself to the expertise, the size, and even the salary of the professional staff of the Health Systems Agency. It also protects employees or members of the Health Systems Agency in the performance of their duties from financial damages, provided they exercise due care.

FINANCING HEALTH SYSTEMS AGENCIES

Planning grants will be awarded to a Health
(Continued on next page)

Systems Agency on the basis of 50 cents per capita, up to a maximum of \$3,750,000 per year. The minimum planning grant is \$175,000 per year. Under the current areawide health planning concept, from 25 to 50 per cent of the funding of the "b" agency had to come from local funds.

Under the new legislation the federal government will match acceptable non-federal funds contributed to the Health Systems Agency on a dollar-for-dollar basis up to a maximum of \$125,000, assuming that the federal dollars are available. Private contributions, however, are not acceptable if they include any funds contributed to the agency by an individual or private entity which has financial, fiduciary, or other direct interest in the development, expansion or support of health resources, or are funds which are paid to the agency for the performance of particular services, or otherwise contributed to the agency with conditions as to their use.

AREA HEALTH SERVICES DEVELOPMENT FUNDS

Upon meeting certain criteria the Health Systems Agency will be eligible for health services development funds. The amount awarded may not exceed \$1 per capita and is based on population, average family income, and the supply of health services in the area. The health services development funds are to be used for grants and contracts to public and nonprofit private entities for assistance in achieving the objectives of the health systems plans. None of these funds may be used for health facilities construction or for the provision of direct health services to an individual. While there is no limit on the amount of a grant or contract, no organization can receive more than two one-year grants or contracts for a given project or program.

THE STATE HEALTH PLANNING AND DEVELOPMENT AGENCIES (HSA)

The Governor must designate a State Health Planning and Development Agency (State Agency) in accordance with an agreement with the Secretary. The designated agency can be any department of government; in general, state human resource agencies and state health departments are expected to receive the designation; however, some governors may decide to assign the responsibility to the executive department or to a planning arm of state government.

The agreement between the Governor and the Secretary is limited to a 12-month period. The Secretary has the authority to determine the size of the staff and the qualifications of employees

of the state agency. If there is not an agreement worked out between the state agency designated by the Governor and the Secretary of Health, Education, and Welfare within four years, then the state involved will not receive any federal funds under the Public Health Service Act, Community Mental Health Centers Act, and the Alcohol Abuse and Alcoholism Act of 1970.

The functions of the State Health Planning and Development Agency are:

- a. Conduct state health planning activities and implement statewide plans.

- b. Prepare a state plan in accordance with the Health Services Plans prepared by the Health Systems Agencies for the approval of the Statewide Health Coordinating Council (SHCC).

- c. Assist the Statewide Health Coordinating Council in reviewing the state medical facilities plans and administer the approved plan.

- d. Serve as the designated planning agency in accordance with PL 92-603. These functions must take into account any recommendations made by the Health Systems Agencies respecting area needs for new institutional health services.

- e. Review the appropriateness of existing institutional health services at least every five years and make public its findings.

The state program must provide for coordinating data secured through the Cooperative Health Statistics System and require providers of health care to make available statistical information.

The state agency has one year to complete its findings after the Health Systems Agency has made its recommendations on existing institutional health services. If the state agency makes a decision inconsistent with the Health Systems Agency, it must submit a detailed explanation to the Health Systems Agency. If a Health Systems Agency disagrees with a state agency decision, the Governor, at the request of the Health Systems Agency, will have another state agency either reaffirm or overturn the original decision.

In the implementation of item (d) each state is required to have a Certificate of Need Program by the end of the first regular state legislative session which begins after January 4, 1975, the date of enactment.

Prior to signing any agreement with the Governor on the State Health Planning and Development Agency there must first be established a Statewide Health Coordinating Council, which is discussed in the next section. The authorizations for State Health Planning and Development Agen-

cies are \$25 million for fiscal 1975, \$30 million for fiscal 1976, and \$35 million for fiscal 1977.

THE STATEWIDE HEALTH COORDINATING COUNCIL (SHCC)

The Governor is required to establish the Statewide Health Coordinating Council with no less than 16 representatives appointed from lists of at least five nominees submitted by each Health Systems Agency. Each Health Systems Agency is entitled to at least two representatives on the State Health Coordinating Council, of whom not less than half shall be consumers. The Governor may appoint an additional number not to exceed 40 per cent of the total membership. A majority of this 40 per cent must be consumers. As with the Health Systems Agency governing body, the Veterans Administration must be represented if there are two or more Veterans Administration health facilities in the state. At least one-third of the provider members of the SHCC must be direct providers of health care.

The major functions of the Statewide Health Coordinating Council are:

- a. Prepare a State Plan, using the Health Systems Plans (HSP) and the Annual Implementation Plans (AIP).

- b. Conduct a public hearing on the State Plan.

- c. Approve or disapprove most health-related federal funds coming into the state.

- d. Approve or disapprove the State Medical Facilities Plan, through which federal construction and modernization funds can be secured.

- e. Review and comment on the administrative planning money coming to the HSAs, and on proposed uses of both planning and development funds by HSAs.

THE NATIONAL COUNCIL ON HEALTH PLANNING AND DEVELOPMENT

The Act provides for the creation of a 15-member council appointed by the Secretary of Health, Education, and Welfare. Nonvoting ex-officio members of the Council are the Chief Medical Director of the Veterans Administration, the Assistant Secretary for Health and Environment of the Department of Defense, and the Assistant Secretary for Health of the Department of Health, Education and Welfare. The function of the council is to advise the Secretary with respect to the development of national guidelines for health planning. National guidelines must be promulgated by July of 1976. The council also provides advice on the implementation of the Act and evaluates the implications of new medical technology as it relates to the delivery of health services.

Other provisions of the Act allow the Secretary to award grants for rate regulation to six states, limited to three one-year grants. These authorizations for 1975 are \$4 million; 1976, \$5 million; and 1977, \$6 million. Provision is also made for the establishing of five Centers for Health Planning. These centers are charged with providing the Health Systems Agencies and the State Agencies, consultation and technical assistance. The monies authorized for Health Planning Centers are \$5 million, \$8 million, and \$10 million, in 1975, 1976, and 1977, respectively.

In order to permit an orderly transition in phasing out the old and phasing in the new, existing State Comprehensive Health Planning Agencies (314 "a" agencies) will continue to have funds appropriated through June 30, 1976 for their support and for obligation up to three months after the date on which the State Health Planning and Development Agency is designated. Funds are also authorized to be available for Experimental Health Services Delivery Systems and Areawide Comprehensive Health Planning Agencies (314 "b" agencies), until after a Health Systems Agency has been designated, or June 30, 1976, whichever is later.

HEALTH FACILITIES CONSTRUCTION

The National Health Planning and Resources Development Act of 1974 amends the Hill-Burton Program to provide federal grants and loans to public and nonprofit private agencies, and loan guarantees and interest subsidies to nonprofit agencies for:

- *Modernization of existing medical facilities;

- *Construction of new outpatient facilities;

- *Construction of new inpatient facilities in areas which have experienced recent rapid population growth; and

- *Conversion of existing medical facilities to provide new health services.

The bill also authorizes the Department of Health, Education, and Welfare to provide direct assistance through project grants for up to 75 per cent of the costs (100 per cent in poverty areas) for construction and modernization projects designed to prevent or eliminate safety hazards in medical facilities or to avoid non-compliance with state or voluntary licensure or accreditation standards. The Act authorizes the Department of Health, Education, and Welfare to make an annual allotment to each state of not less than \$1 million, based on population, financial need, and

(Continued on page 442)

Don't Practice On Me

It Is Most Important To Appreciate The Debt We Owe Our Patients For Our Education.

By Judah M. Folkman, M.D.

You have already heard so many words of wisdom; what could I say that would be of any value as you begin your journey in the hospital as new interns or house officers?

Let me tell you a story about a patient I saw when I was a new house officer. A little old lady was brought to the emergency ward with a broken hip. My duty was to assign patients to the appropriate admitting services. I remember asking my senior, "Which orthopedic resident should be called?"

At this the lady looked up with an expression as if to say, "I'm poor, but not destitute." She opened her purse, pointed to some \$10 bills and said: "Could I have a real doctor . . . I think I can afford a real doctor . . . Don't let them practice on me."

I quickly tried to comfort her by explaining that although this was a teaching hospital, an attending staff surgeon would supervise the resident who operated upon her hip. Well, the hip was repaired, and she went home in good shape.

Many years later, at the completion of my training, I was, for some reason, reminded of her

JUDAH M. FOLKMAN, M.D., *Julia Dyckman Andrus Professor of Pediatric Surgery and Surgeon-in-Chief, Children's Hospital Medical Center, Boston, Massachusetts.*

Read at the 1975 Class Day exercises at Harvard Medical School. The paper is reprinted from the Harvard Medical Alumni Bulletin, issue of July/August 1975, with the permission of the author and publisher.

plea, "Don't practice on me." Her simple request now seemed to take on a more profound meaning. Perhaps without knowing it she had said something about what makes the medical profession unique.

The profession you now enter is perhaps the only human activity where every attempt to relieve suffering is accompanied by the risk that we may *cause* suffering. Sometimes the risk is small, sometimes great, but it is always there.

Now I am not talking about injections which hurt, or medicines that taste bitter. What I am talking about is what you and I know deep down, but what I think we have never dared to explain to the public — that good clinical judgment is learned from bad judgments. Good clinical judgment comes in the final analysis from the awful experience of making mistaken or bad clinical judgments. Oh yes, a little clinical judgment can be learned from one's teachers and some from reading the experiences of others. But by far, most good clinical judgment and clinical skill is learned the hard way, from practice.

The lady with the broken hip thought that only the intern "practiced" on people. She was wrong. We all do.

By now you have seen, or soon will see, a child with abdominal pain and you think it is simple gastroenteritis, and you send the child home. But it turns out to be appendicitis and is ruptured. The child nearly dies, but does not, and after that your clinical judgment is much improved. You tell your colleagues, "Gee, I really learned something from that case." but it was a frightening



"THE DOCTOR" by Fildes

experience for the family. Or, you give penicillin, but forget to ask about allergy, with a disastrous result.

There is probably not a surgeon among us who has not had an anastomosis leak, which nearly caused the patient's death, or did so. Would the patient have survived with a more experienced surgeon? Who is to say? But, the original surgeon, shattered by this experience, now becomes even more meticulous and develops the compulsive technique necessary for safe surgery, and subsequent patients do well.

Every surgeon knows of patients who would be alive today if they could have been operated upon at a time in the surgeon's career when he or she had had more experience.

I know of a general practitioner who, through years of practice, kept a catalog of all of his mistakes. As he progressed from house officer to *locum tenens*, to established practitioner, he became more savvy. He says, "Although I made many mistakes, I never made the same one twice, and therefore, I learned rapidly and gained a reputation as the best doctor in my region."

You and I travel the same learning curve. But even after we have mastered our particular fields,

or reached the height of experience, we may still be the cause of our patient's suffering. This time, not from personal bafflement about the disease or, to use a better term, personal ignorance, but this time from general ignorance. I mean that patients may also suffer because our entire profession does not understand the disease, like cancer, or a disease even more insidious that we ourselves create without realizing it.

An example is the stilbesterol story whereby thousands of women were able to avoid repeated miscarriages and have normal babies, but we now discover, 15 years later, that a few of the daughters of these women carry the risk of cancer caused by the stilbesterol. Or, we give cortisone to a child to relieve the agony and obstruction of regional enteritis, but this stunts the child's growth. It is "halfway technology." We, as a profession, do not know how to cure this illness completely. Transplantation is the same. We substitute one disease for another, with the best of intentions.

These two troublemakers, personal ignorance and general ignorance, follow wherever we attend a patient. In the office or in the clinic, at the bedside or in the operating room these two familiar

(Continued on next page)

enemies lurk in the shadows, and forgive me Doctor Abrams, sometimes even in the x-ray reading room. We try to reduce their damage to an absolute minimum, but we cannot eliminate them completely. Some of our colleagues refuse to believe that these two apparitions exist at all. They blame their complications on someone else. "It was the nurse's fault, or the patient's fault." They prefer to care for patients and make rounds in a large pack or team, never alone. If there is an unfavorable result from a drug, no one is responsible. There are some surgeons who can never admit to any unsatisfactory results.

Probably the most benign form of escape from the clinical problem that puzzles us is simply to dismiss it with, "Oh, yes, we see this." The best example comes from the diary of Charles Nicole describing his discovery of the transmission of typhus. He was working in a hospital in Tunisia in the early 1900s during a raging epidemic of typhus that was highly infectious. Everyone in a household, or visitors to that household, caught the disease. But Nicole observed that patients in the hospital without typhus, next to typhus patients, did not catch the disease.

He asked his chief, "Why is this? Why, with a disease so infectious, do you not have to segregate the patients once they are inside the hospital?" The chief answered, "We see this."

Nicole looked up the literature and found that this observation had been known for five centuries. For 500 years, seniors had been telling juniors on medical wards, "We see this."

Then, one afternoon while leaving the hospital, he saw a new patient being admitted with typhus, and he now rephrased the question. "Why is it when he crosses the threshold into the hospital is he no longer infectious?" He wrote in his diary, "I saw them take off the patient's clothes and put on a hospital gown, and I knew then that the disease must be in the clothes; it could only be a louse."

Thus, the habit of dismissing this puzzling problem with "we see this," stopped progress, in this instance, for 500 years.

At one time or another, all doctors are put in a position where they must pretend to know what they are doing. Often our patients force this posture upon us. The surgical personality epitomizes this "often wrong but never in doubt" attitude. Yet the airline captain has the same problem. He says, "Good morning ladies and gentlemen, we

will arrive in Chicago at exactly 1:55." This is very reassuring.

Suppose he said, "I *think* we can get you to Chicago." You might want to change airlines or choose another pilot.

And then, at 34,000 feet, suddenly the breakfast trays leap into the aisle. The captain comes on: "Ladies and gentlemen, you may have noticed that we are encountering some turbulence." How quaint. He is totally surprised by it. It did not show up on any of his instruments. It is called invisible turbulence . . . idiopathic turbulence, but he does not act surprised. He is completely calm. He says "we see this!"

However, in the long run, it is better if we come to terms with the uncertainty of medical practice. Once we recognize that all of our efforts to relieve suffering might on occasion *cause* suffering, then we are in a position to learn from our mistakes and, most important, to appreciate the debt we owe our patients for our education.

It is a debt we must repay. We are obligated. It is like tithing. What do I mean by the word tithing? Medical tithing? It is easier to say what it is not. I doubt that the debt we accumulate can be repaid our patients by, for example:

- Trying to reduce the practice of medicine to a 40-hour week, or

- Dissolving the quality of our residency programs just because certain groups of residents in this country have refused, with the use of legal tactics, to be on duty more than every fourth night, every fifth night, or any nights at all, or

- Refusing to see Medicare patients when the state cannot afford to pay for them temporarily, or

- Going on strike.

But we can repay the debt in many ways; it is the urge to do this that motivates many physicians to:

- Attend postgraduate courses and seminars, or

- Be available to their patients at all hours, or

- Teach, or

- Take re-certification examinations, or

- Volunteer, maybe in the future, for national service, or

- Carry out investigation or research, perhaps the most difficult of all.

The individual who attempts to combine investigation with a clinical career, travels the toughest road, however fruitful. His counterpart in basic

(Continued on page 443)

The Introduction Of Chemical Bleaching Into The United States In 1811

Providence Physician Introduced Chlorine Bleaching To American Textile Industry And Rhode Island Ultimately Monopolized The Process.

By David C. Hardman*

There were some fulling and dye plants in this country, but no real bleaching plants prior to 1800. We refer to cellulosic bleaching, because sulfur bleaching of wool was known and practiced as far back in history as Roman times.

In *Memoir of Samuel Slater* by George S. White the following appears in a footnote:

Bleaching, calendering, &c. were introduced at great expense in Providence, Rhode Island, by Doctor Bowen, where the water is well adapted, and there is now a bleaching and beetling establishment called by his name. The bleaching business is now very extensive in the United States, and they are becoming more perfect in the process, as more attention is paid to every department in the preparation for calico printing.¹

I read this several years ago. More recently, when I ran into it again, I wondered, Who was Doctor Bowen and where was the bleachery called by his name? The first directory for the city of Providence was not published until 1824, and it does not list a Bowen bleachery. It does list an Esek Bowen as a dyer, located on Charles Street and later at the corner of Westminster and Union Streets.

DAVID C. HARDMAN, *late Member of the American Association of Textile Chemists and Colorists.*

Extracted from a History of Textile Bleaching in America placed by the author in the library of the American Association of Textile Chemists and Colorists located in the Research Triangle in North Carolina.

*Mr. Hardman died June 12, 1973 in his 78th year.

A search was made in the Rhode Island Historical Society records, Brown University, the Providence Public Library, and the Rhode Island Medical Society library.

In an October 19, 1811 issue of the PROVIDENCE PATRIOT & COLUMBIAN PHENIX, a weekly newspaper, we found the following:

The subscriber having returned to his native place, after an absence of more than five years, employed in the pursuit of medical information, in the most celebrated Universities and Hospitals in Europe, now offers his services to his friends, and public in general, as a Practitioner in Physics, Surgery, and Midwifery.

N.B. He may be found at all hours at his father's, Dr. William Bowen.

WILLIAM C. BOWEN

It was further noted that Doctor William C. Bowen had "taken his son as partner and assistant."

This notice was repeated in several issues in the following year of 1812. Also in the Saturday, February 8, 1812 issue of the same paper, we found the following notice inserted by Doctor William C. Bowen:

Having opened his surgery in College Street, gives this public notice, that he will receive there, every Wednesday morning, from nine to eleven o'clock, poor persons afflicted with Diseases of the Eyes, to whom advice and assistance will be granted gratis.

(Continued on next page)

This notice also was repeated several times during 1812.

In 1859 Doctor Usher Parsons wrote:

Dr. William C. Bowen, the only son of Dr. William Bowen of Providence was born June 2d, 1785. (Note: this was the same year in which the French chemist, Berthollet, published his experiments in the use of "oxymuriatic acid" (chlorine gas) for bleaching cellulosic fibers.) He entered Rhode Island College (now Brown University), but removed to Union College, in Schenectady, New York, with the President Maxcy, at the time he accepted the presidency of that institution, and was graduated there in 1803. On his return to Providence he commenced the study of medicine with his uncle, Dr. Pardon Bowen, with whom he continued till 1806 when he embarked for Europe, to complete his education.

He studied in Edinburg under the instructions of Professor Hamilton, and in 1807 received his degree (at the age of 24), choosing the subject of his inaugural dissertation, "De Sanguine Mittendo." He passed some months in Holland, one season in Paris, and went thence to London, and became the private pupil of Sir Astley Cooper, with whom he continued until August 1811. He then returned to his native city, and commenced the practice of physic and surgery. In 1811, he was chosen Professor of Chemistry in Brown University, and delivered two courses of lectures. About this time, he commenced a course of experiments to discover the basis of bleaching liquor which was just then brought into use in England. This he did, having in view the formation of a bleaching establishment in Providence. But the exposure of his lungs, in this pursuit, to the action of noxious acids, laid the foundation of disease that proved fatal. He died April 23d, 1815, in the thirtieth year of his age.

In the death of Dr. William C. Bowen, Rhode Island lost its brightest ornament of the medical profession. No one before his time had enjoyed the privilege of sitting under the teachings of the first men in Europe, for so great a length of time; and with his ardor in the pursuit of the professional knowledge, he could not fail attaining to great celebrity. His suavity and kindness of manner endeared him to all who were subject to his professional care; and no one could be more successful in gaining the respect and confidence of the good and wise.

In proof of this, it may be observed that his preceptor, Dr. Hamilton, of Edinburg, called him in a consultation in a perilous disease of his own wife; and the writer of this notice had the satisfaction of hearing very honorable mention of his talents by Sir Ashley Cooper. His labors upon chlorine, though destructive to his own fortune and health and life, laid the foundation of the present flourishing bleacheries in Rhode Island, that have proved so conducive to its welfare and prosperity. (Note: By the turn of the century 98 per cent of all the bleaching done in this country was done within a forty mile radius of the city of its birth in this country, Providence, Rhode Island.)²

The PROVIDENCE PATRIOT & COLUMBIAN PHOENIX of Saturday morning, April 29, 1815, carried a whole column obituary. While it noted his connection with Brown University and his research, nothing was mentioned of his connection with the chlorine bleaching process.

Doctor Bowen's death is the first recorded resulting from the dangerous chlorine gas, but we can speculate as to the number of unrecorded deaths that had occurred in the development of chemical bleaching, not to mention the number of victims who had permanent lung damage.

In BOOKS AT BROWN, a publication of the Brown University Library, the late Professor J. Walter Wilson wrote:

The Philophysian Society was founded in 1818 . . . "For the purpose of forming a society for trying experiments, and acquiring knowledge in chemistry, botany, and mineralogy, and other branches of the natural sciences."³

A document was prepared and circulated to solicit funds to buy laboratory apparatus. The money raised was used to buy from Doctor Bowen, Sr., "apparatus" for which the Philophysian Society had contracted to pay \$100 — \$50 down and \$50 at the end of the year from the date of the contract, November 9, 1918.

The apparatus, which consisted of 79 items of glass and 40 items of metal, was in fact the equipment for chemical experiments that had belonged to his son. The educational institutions of that day did not furnish the apparatus used by the lecturing professor. He had to furnish his own.

So not only did Doctor William C. Bowen preside at the birth of the chemical bleaching industry in this country, but his laboratory equipment also contributed to the nascent Brown University

(Continued on page 445)

Editorial

NURSE PRACTITIONERS PROGRAM IN RHODE ISLAND

Until now there has been only modest activity in Rhode Island in the nurse practitioner field. Six nurses are currently spending a year away from their nursing duties to procure nurse practitioner certificates in a new program at the University of Rhode Island.

The program, financed by a grant from the United States Veterans Administration, will provide for the participants an opportunity to extend their nursing skills and develop new aptitudes which will permit greater involvement in the delivery of health care. Upon completion of the program, each nurse will be able to diagnose, treat, and counsel patients in cooperation with physicians and other health workers.

A recent study indicated that there were 14 nurse practitioners in the state. As pointed out by Doctor Barbara Tate, dean of the URI College of Nursing, Rhode Island has fewer doctors than the national average, and of those, 80 per cent are over 50 years of age. Only 16.8 per cent are general practitioners. "However," she states, "we have approximately 20 per cent more nurses for our population than the national average. So preparing some of the nurses to work more closely with physicians is an obvious move."

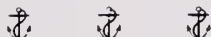
A large portion of their duties will be medical assessment. They will be prepared to take medical histories, do physical examinations, and order tests. They will then identify those persons in need of immediate attention by a physician. Applying the same methods to the chronically ill, they will be able to follow the patient's progress, make simple changes in medication, and decide when further examination by the physician is warranted.

The concept of the nurse practitioner emerged in the United States when medical corpsmen returned from World War II and later conflicts. Well-trained to give emergency and simple medical care, these men sought a means of putting their knowledge to use in civilian situations. As is well known, few universities began "medical assistant" or "physician assistant" programs. When nurses also requested admission to these programs, it became expedient to initiate separate courses for nurse practitioners.

To qualify for the program at URI, a nurse must hold a B.S. degree in nursing and have at least two years nursing experience. Dean Tate estimates that the six nurses now studying at URI average five years of experience. Their course work is divided between classroom study (including graduate level physiology and business policy for interagency relations) and a practicum in hospitals and clinics under the supervision of physicians and nurse practitioners.

It was originally planned to accept nine students in the first class. The Federal grant, however, was not approved until June 27, 1975. Only six students could begin classes in July on such short notice. It is anticipated that a full nine candidates will enter the next course. Although the grant will expire in two years, it is hoped that by that time the course will have become a permanent part of the College of Nursing master's degree program.

This is a worthwhile program with a progressive objective. It should prove to be useful and successful.



GALLSTONES: CONCEPTS OF PATHOGENESIS AND TREATMENT

(Continued from page 431)

ar.hea due to the increased load of bile salts in the colcn, where they are cathartic; biliary colic due to dislodgement of smaller stones; and recurrence of gallstones on cessation of therapy.

The implications of recent developments regarding the pathogenesis and medical treatment of gallstone disease are exciting and bode well for improved care in patients with biliary tract disease.

REFERENCES

- ¹Sampliner RE, Bennett PH, Comess LJ, et al.: Gallbladder disease in pima indians. Demonstration of high prevalence and early onset by cholecystography. *N Engl J Med* 283:1358-64, 17 Dec 70
- ²Heaton KW: The epidemiology of gallstones and suggested aetiology. *Clin Gastroenterol* 2:67-83, Jan 73 (74 ref.)
- ³Admirand WH, Small DM: The physiochemical basis of cholesterol gallstone formation in man. *J Clin Invest* 47:1043-52, May 68
- ⁴Small DM, Rapo S: Source of abnormal bile in patients with cholesterol gallstones. *N Engl J Med* 283:53-7, 9 Jul 70
- ⁵Vlahcevic ZR, Bell CC Jr, Swell L: Significance of the liver in the production of lithogenic bile in man. *Gastroenterology* 59:62-9, Jul 70
- ⁶Metzger AL, Adler R, Heymsfield S, et al.: Diurnal variation in biliary lipid composition. Possible role in cholesterol gallstone formation. *N Engl J Med* 288:333-6, 15 Feb 73
- ⁷Swell L, Gregory DH, Vlahcevic ZR: Current concepts of the pathogenesis of cholesterol gallstones. *Med Clin North Am* 58:1449-71, Nov 74 (97 ref.)
- ⁸Vlahcevic ZR, Bell CC Jr, Buhac I, et al.: Diminished bile acid pool size in patients with gallstones. *Gastroenterology* 59:165-73, Aug 70
- ⁹Danzinger RG, Hofmann AF, Schoenfield LJ, et al.: Dissolution of cholesterol gallstones by chenodeoxycholic acid. *N Engl J Med* 286:1-8, 6 Jan 72



NATIONAL HEALTH PLANNING AND RESOURCES DEVELOPMENT ACT OF 1974

(Continued from page 435)

the need for medical facilities projects. For fiscal years 1975, 1976, and 1977, \$125 million, \$130 million, and \$135 million, respectively, are authorized for health facility construction grants.

THE RHODE ISLAND SITUATION

Under Section 1536 of the Act, exceptions are permitted for the Virgin Islands, Guam, Trust Territories of the Pacific, and American Samoa. States which have no county or municipal health departments or institutions and have maintained,

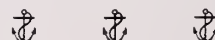
prior to the date of the passage of the act, a health planning system which substantially complies with the act, can also apply to the Secretary of HEW for a waiver.

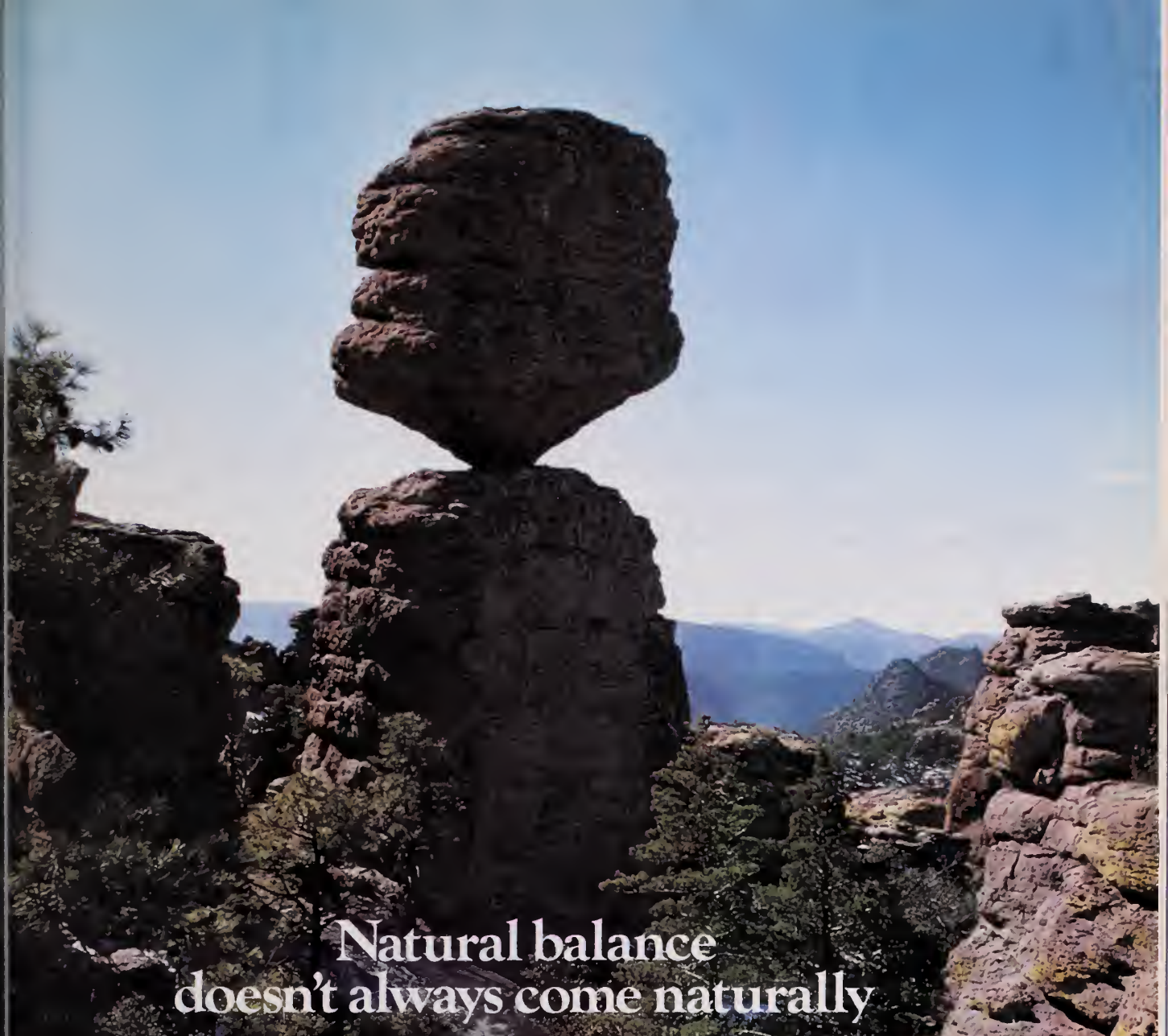
Section 1536 is referred to as the Pell Amendment, after Senator Claiborne Pell of Rhode Island. States which are granted a waiver are not required to designate health systems areas or to create a Health Systems Agency, and all the members of the Statewide Health Coordinating Council are appointed by the Governor under Department of Health, Education, and Welfare regulations.

Rhode Island has applied for a waiver under Section 1536. This application is based on the facts that Rhode Island does not have any municipal health departments or institutions, but does have a substantial health planning system. It is further believed that, for health planning purposes, Rhode Island should not be divided into health service areas, but rather should be treated as a single entity just as in the case of the Professional Standards Review Organization. The application for a waiver is also predicated on a philosophical base that no state should have a single Health Systems Agency. There should be a minimum of two Health Systems Agencies in a state or none. The single Health Systems Agency in a state tends to promote duplication, waste, and friction, creating a "two cooks in the kitchen" situation.

As of this writing the waiver for Rhode Island, while expected, has not been granted. The Bureau of Health Planning and Resources Development of the Health Resources Administration of the Department of Health, Education, and Welfare is the responsible agency at the federal level to implement Public Law 93-641. This bureau is in the process of developing guidelines and regulations with regard to the establishment of the Health Systems Agencies, State Health Planning and Development Agencies, and Certificate of Need Programs.

The National Health Planning and Resources Development Act of 1974 is now the law of the land. It attempts to bring together health planning, regulation, and development in order to control spiraling costs, provide equal access, and improve the quality of health care in the United States. Attempting to achieve these goals with this instrumentality will represent another interesting chapter in the history of community health.





Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

ound useful in the management of vertigo* associated with
ases affecting the vestibular system.
an relieve nausea and vomiting often associated with vertigo.*
ual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
so available as Antivert (meclizine HCl) 12.5 mg. scored
ts, for dosage convenience and flexibility.
ntivert/25 (meclizine HCl) 25 mg. Chewable Tablets for
ea, vomiting and dizziness associated with motion sickness.

SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of
ences — National Research Council and/or other information, FDA has classified
indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with
ion sickness.

Probably Effective: Management of vertigo associated with diseases affecting the
estibular system.

Investigational: Classification of the less than effective indications requires further
estigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during preg-
nancy or to women who may become pregnant is contraindicated in view of the
teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation
has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./
kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate.
Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hyper-
sensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients
should be warned of this possibility and cautioned against driving a car or operating
dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children
have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred
vision have been reported.

More detailed professional information available on
request.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

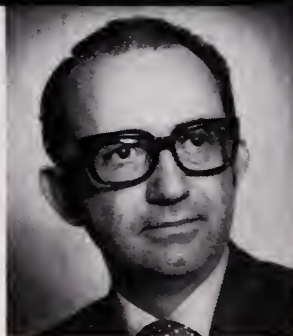
Antivert[®]/25 (meclizine HCl) 25 mg. Tablets for vertigo*

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. A few physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

Opinion
&
Dialogue

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is

no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebotrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a pa-

tient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



DYAZIDE®

Each capsule contains 50 mg.
of Dyrenium® (brand of triamterene)
and 25 mg. of hydrochlorothiazide.

makes sense



For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

* WARNING

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance.
Hydrochlorothiazide to help keep
blood pressure down and triamterene
to help keep potassium levels up.

DON'T PRACTICE ON ME

(Continued from page 438)

science thinks he is a dilettante researcher. His clinical colleagues think he is unsafe. And his mother-in-law says, "He's 35 years old and still working with animals. When will he be a real doctor?"

But why do I tell you this? You already know what I mean. I think we need to be reminded that these efforts are essential to our profession. Especially at a time when fewer and fewer of those entering our profession are willing to make much self-sacrifice, or willing to come back to the hospital at night, or be away from their families, or undergo the discipline required to be a first-rate physician or surgeon.

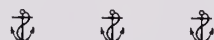
And it is a time when we need to let the public understand the uncertainties of medical practice. That "good clinical judgment is often acquired from bad judgment," and that we realize the debt we owe our patients.

That this theme is not well understood can be seen in the increasing inability of juries to distinguish between human error and outright negligence. Every simple honest mistake becomes a potential malpractice liability. There is the inability of our elected representatives to see hospitals except as public utilities, with patients labeled as customers. The terms "consumer" and "provider" assume that medical practice can be completely standardized. And then the Medicare laws tend to exclude physicians in training.

Do you remember the famous painting, *The Doctor*? Painted in 1891, a doctor in a frock coat sits in the home of a child who is dying of a disease at that time called typhlitis. Both parents in the background are deeply anguished. I used to show this to first year medical students, just out of college, and would ask them, "Tell me in one word, what does that picture mean?" Their usual response was "compassion." It meant the compassionate physician. But when I asked fourth year medical students, they replied, "bafflement." They said the patient really had appendicitis, but it was unknown at that time. The patient suffered from the state of general ignorance of the profession; his doctor sat by helplessly. This doctor's titling was limited. He could only give compassion. Fortunately *we* are offered wider opportunities to tithe.

Compassion certainly, but also all of the other qualities that I have mentioned by which physi-

cians should repay patients for their own education. Then we can say with peace of mind that we have earned the right to *practice* medicine.



Peripatetics

EITHNE McCANN, Chief of Physical Medicine and Rehabilitation at St. Joseph's Hospital, was among a group of U.S. physicians who assisted at the Pan American Wheelchair Olympics for the handicapped recently.

* * *

In recent months CHARLES F. JONES has attended a meeting on "topics of internal medicine" at Johns Hopkins Hospital in Baltimore, sponsored by the American College of Physicians; and RAYMOND E. MOFFITT has attended a meeting on "gastro-intestinal malignancy," sponsored by the American Gastro-Enterological Association, and the annual meeting of the American Society of Gastro-Intestinal Endoscopy in Texas.

* * *

(Continued on page 445)

OFFICE SPACE FOR RENT

THE 111 PLAIN ST. MEDICAL BUILDING
is a newly renovated construction within
eye-view and two minutes' walk of the
RHODE ISLAND HOSPITAL

and less than six minutes' drive from
BROWN U. MEDICAL SCHOOL
ROGER WILLIAMS HOSPITAL
M'RIAM HOSPITAL
VETERANS HOSPITAL

and a little longer from the
LADY OF FATIMA — ST. JOSEPH'S COMPLEX

Offices include carpeting, electric heating, air-conditioning, electronic protection, elevator, janitorial services, laboratory and x ray services.

**FOR APPOINTMENT
CALL 331-6317 ANYTIME**

A New Look in Hotline Service. Three Lines - One Number.

274-4848

We've changed our telephone system to provide better service for you.



Blue Shield of Rhode Island, 444 Westminster Mall, Providence, R. I. 02901

THE INTRODUCTION OF CHEMICAL BLEACHING INTO THE UNITED STATES IN 1811

(Continued from page 440)

Chemical Laboratory. His name should be honored and not be buried in the libraries in Providence, Rhode Island.

However, after finding the obituary we were not satisfied and could not square it with George S. White's statement that "there is now a bleachery and beetling establishment called in his name."

In further search of the PROVIDENCE PATRIOT & COLUMBIAN PHENIX I found in the issue July 29, 1815, three months after Doctor Bowen's death the following item:

CHEMICAL BLEACHING WARRANTED

The Bowen Steam Bleaching Co.

Hereby give notice, that having increased their establishment, they shall continue the Bleaching of Cotton Yarn and Cloth, according to the mode invented and practised upon by the late Dr. Wm. C. Bowen, deceased. The extensive additions to their machinery will enable them to Bleach with great dispatch, and the improvements upon the mode of Chemical Bleaching, made by Dr. Bowen, give them confidence in assuring the public, that the process will not injure the texture of the Cloth. Against all injuries by bleaching, the Warranty of the Company is hereby given.

Terms: One shilling per pound, payable in cloth at the usual prices — liberal discounts for cash.

There is no doubt that this bleached cloth and yarn were deluxe items. They never had such white whites from sun bleaching. Most of the material was used for women's fancy dress wear and infant clothing. Colors would be much brighter on this clear ground.

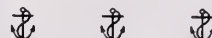
I believe that this research has proven beyond a doubt that Doctor Bowen started chemical bleaching in this country and in the city of Providence. I regret that we were never able to pinpoint the exact location of the bleachery called in his name.

REFERENCES

¹White GS: Memoir of Samuel Slater, The Father of American Manufacturers, Connected with a History of the Rise and Progress of Cotton Manufacture in England and America with remarks in the Moral Influence of Manufactories in the United States, Philadelphia 1836. Page 300

²Parsons U: Sketches of Rhode Island Physicians Deceased Prior to 1850. Trans Rhode Island Med Soc 1:15-16, 1859

³Wilson JW: The Philophysian Society at Brown University (1818-1827). Books at Brown 20:40-56, 1965



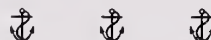
PERIPATETICS

(Continued from page 443)

On October 1, 1975 an unusual reunion of four doctors who were tent mates during the Mexican War 59 years ago took place at the home of Maurice T. Root in West Hartford, Connecticut.

Fifty-nine years ago, four Cornell University students joined the New York National Guard. Their first assignment was exercising Company horses in New York's Central Park. They were then sent to the McAllen, Texas area in the Mexican War and assigned to the same tent.

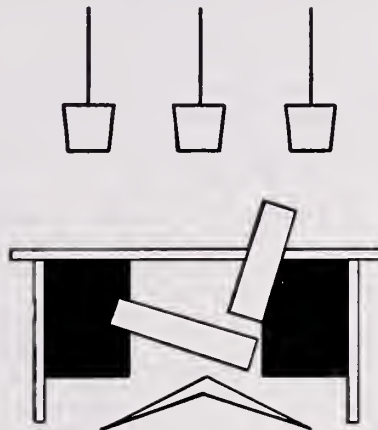
They were: Maurice T. Root of West Hartford; Robert White of Vineyard Haven, Massachusetts; Morton Ryder of Carmel, New York; and ALFRED POTTER of Wakefield, Rhode Island.



Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

IF YOU'RE SELF-EMPLOYED:

- How not to pay taxes on up to \$7,500 with an INBANK retirement plan.
- How not to pay a sales commission on your retirement plan.
- How to earn the highest interest rate in INBANK history.

You have probably heard or read about the new law that allows the self-employed to set aside up to 15% of earned income or \$7,500 (whichever is less) in a retirement plan. The money set aside is completely tax deductible, and the interest earned is not currently taxable. You pay income taxes only on receiving these funds during retirement. Then your tax bracket should be lower because of your retired status.

You qualify for this tax break if you operate an unincorporated business. So it's perfect for doctors, dentists, lawyers, artists, accountants, store owners, writers, dealers, carpenters, house painters and countless others.

• INBANK's Retirement Savings Plan.

There are two good reasons to set up your retirement plan with INBANK. First, unlike some other banks we won't charge you an initial fee for setting up your plan or an annual fee for running it. And INBANK's 7.50% six- to ten-year investment savings plan yields 7.90% with daily compounding. Accounts with shorter maturities and lower rates are available. The chart shows how much money the 7.50% account will mean to you. So stop in at any INBANK office and start your own retirement plan.

\$7,500 A YEAR CAN ACCUMULATE TO:		
After	With a tax-sheltered plan	Without a tax-sheltered plan
5 years	\$ 45,912	\$ 20,210
10 years	108,135	44,500
20 years	339,436	108,814
30 years	834,195	201,746

NOTE: Figures assume 50% income bracket and 7.50% rate of return

INBANK
Industrial National Bank
Something extra

Physicians Seeking Opportunities In Rhode Island

Richard S. Fightlin, M.D.
2989 Alta Laguna
Laguna Beach, CA 92653
Urologist

* * *

Jose Lillo, M.D.
Sisters of Charity Hospital of Buffalo, NY
2157 Main Street
Buffalo, NY 14214
Obstetrics-Gynecology

* * *

Bruce M. Smoller, M.D.
435 East 70th Street
New York, NY 10021
Psychiatrist

* * *

Mrs. B. M. Smoller, M.D.
435 East 70th Street
New York, NY 10021
Radiology

* * *

Richard A. Fraser, M.D.
15 Rose Loop
Fort Leavenworth, KA 66027
Urology

* * *

Charles M. Cutler, M.D.
5520 Oliver Avenue South
Minneapolis, MN 55419
Internal Medicine

* * *

Ibrahim Abu Sarris
6511 Landover Road
Cheverly, MD 20785
Cardiology

* * *

Thomas C. McNamara, M.D.
401 Ocala Court, North
Nashville, TN 37211
Urology

* * *

(Continued on next page)



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Vincent Oliviero, M.D.
3605 Apollo Drive
Salt Lake City, UT 84117
Orthopedist

* * *

Louis F. Candito, M.D.
632 Magnolia Street
New Llano, LA 71461
Orthopedic Surgeon

* * *

Ovid Y. H. Yang, M.D., Ph.D.
3807 Platt Avenue
Port Arthur, TX 77640
Pathology

* * *

C. R. Chatterjee, M.D., F.R.C.S.
2321 Garland Drive
Vestavia Hills, AL 35216
General Surgery-Urology
wife — Anesthesiology

* * *

Alan I. Schein, M.D.
119 Upland Terrace
Bala Cynwyd, PA 19004
Ophthalmology

* * *

Donald J. Kurth, M.D.
Apt. 2F
200 Carman Avenue
East Meadow, NY 11554
Orthopedic Surgery

* * *

Irvin Handelman, M.D.
4445 SW 91st Avenue
Portland, OR 97225
Ophthalmology

* * *

Alfredo A. Cona, M.D.
1001 Dorchester Road
Apt. F.
Brooklyn, NY 11218
Obstetrics-Gynecology

* * *

Stephen F. Wetherill, M.D.
St. Louis University
School of Medicine
Department of Internal Medicine
1225 South Grand Boulevard
St. Louis, MO 63104
Internal Medicine

* * *

Stephen H. Mintz, M.D.
2558 Sedgwick Place
Dumfries, VA 22026
Pediatrics

* * *

Pramod Digamber, M.D.
2451 Webb Avenue
Bronx, NY 10468
Diagnostic Radiology

* * *

Mark B. Handler, M.D.
2417 Hempstead Road
Toledo, OH 43606
Plastic Surgery

* * *

Cornelius J. P. Sullivan, M.D.
3814 Cadillac Lane SW
Tacoma, WA 98499
Internal Medicine

* * *

FOR SALE

Home and Professional Office

Garden City area, Cranston, R. I.

FOR DOCTOR — DENTIST — OR LAWYER

First Floor — Large Waiting Room, Four Offices, Receptionist Area and Lavette

Second Floor — Living Room, 3 Bedrooms, Ap-
plianced Kitchen, Full Bathroom.

Ample Parking

Many Extras

Shown by Appointment by Owner

CALL 944-0605

Frederick S. Tan, M.D.
660 East 98th Street
Apt. 12-H
Brooklyn, NY 11236
Hematology/Oncology

* * *

Young M. Lee, M.D.
1030 West 18th Street
Broadview, IL 60153
Otolaryngology

* * *

Greg Prazar, M.D.
University of Maryland School of Medicine
Institute of Psychiatry and Human Behavior
645 West Redwood Street
Baltimore, MD 21201
Pediatrics

* * *

Michael G. Marandolo, M.D.
304 Elsmere Street
Wilmington, DE 19804
General Practice

* * *

Antrony D. Molinaro, Jr., M.D.
York Hill Apts. No. H-106
1927 Queenswood Drive
York, PA 17403
Family Practice

* * *

Jonathan H. Jaffe, M.D.
Family Practice Center
Mac Neal Memorial Hospital
3249 S. Oak Park Avenue
Berwyn, IL 60402
Family Practice

* * *

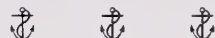
Jerry A. Friemoth, M.D.
Family Practice Center
Mac Neal Memorial Hospital
3249 S. Oak Park Avenue
Berwyn, IL 60402
Family Practice



ONE SENTENCE ESSAY

My ability to win an argument varies inversely with the intelligence of my opponent.

... George Heuer, M.D., late Professor of Surgery at New York Hospital

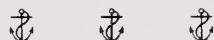


HOW'S THAT AGAIN? DEPARTMENT

REGULATION No. 5 — SUBPART T HIRM-1, Revision No. 33

This transmittal includes those pages which comprise Subpart T to Regulations No. 5 published in the FEDERAL REGISTER of July 2, 1975, relating to the qualifying conditions which organizations must meet to be eligible to enter into a contract with the Secretary as a health maintenance organization (HMO) under the Medicare program.

... Memo from HEW



Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
HOspkins 7-8050



*Get your family
together for the
Portrait you have
been promising
yourself!*

Call now for an appointment!

353-2694

D. A. Gunning Studio

14 Homewood Ave.

N. Providence, R.I.

Society Announces Administrative Changes

Mr. James R. Clarkin, former administrator at the Medical Associates of Bristol County, Inc., has succeeded Lance Taylor as Assistant Executive Director of the Medical Society effective October 6. Mr. Clarkin is a life-long resident of the Fall River-Providence area and holds a Bachelor of Arts Degree from Holy Cross College in Worcester. Mr. Taylor has returned to Chicago to enter the newspaper business.

Also, Ms. Geneva Salisbury has succeeded Ms. Johanna Weindorf as staff secretary. Ms. Weindorf left the Society in October due to her husband's return to his native Oklahoma.

Finally, Ms. Nancy Jo Cerep has assumed overall staff responsibilities for the publication of the RHODE ISLAND MEDICAL JOURNAL. Ms. Cerep is a Cum Laude graduate of Rhode Island College and has had experience in publications and advertising.

CHAPIN ORATOR NAMED

Doctor Mendell Robinson, Chairman of the Committee on Scientific Work and Annual Meeting, announced that Doctor William Harris has been selected to deliver the Chapin Oration at the 1976

annual scientific meeting which will be held May 5 at the new Marriot Hotel in Providence. Doctor Harris, Clinical Professor of Orthopedic Surgery, Massachusetts General Hospital, has particular expertise in the realm of prophylaxis and the treatment of pulmonary embolism.

DR. CARUOLO NAMED COMMISSIONER

Joseph E. Caruolo, M.D. was elected a Society Commissioner at the September 24 meeting of the House of Delegates. He will represent the President of the RIMS at Society Committee meetings and will serve on the Council.

MEDICAL STUDENT MEMBERSHIP IN RIMS

The House approved of the formation of a committee to work out the mechanics of a medical student membership in the Rhode Island Medical Society, review the present intern-resident membership and to report back to the House of Delegates with appropriate recommendations.

Following the approval of the House, President Stephen J. Hoyer, M.D. named Doctors Herbert F. Hager (Chairman), Milton W. Hamolsky, and Nathan Sonkin to serve on the committee.

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

MEDICAL MALPRACTICE INSURANCE AND UMBRELLA LIABILITY INSURANCE

For No Obligation Quotations or Assistance
CALL 751-3312

LEN DIPRETE

DUNCAN B. CAMPBELL CO.
9 So. Angell Street
Wayland Square, Providence, R.I.

Happy to make Home or Office Visits or give
Phone Quotations

PROFESSIONAL OFFICE BUILDING

1339 Smith Street



Custom built 8 room Cape Cod medical building. Macadam parking lot for 9 automobiles. Prime location near Fatima Hospital.

W. HENRY
coleman
REALTORS

245-3050

PERFORMANCE. IT'S A MATTER OF RECORD.

- an unsurpassed record validated in several thousand clinical papers
- rarely interferes with mental acuity
- wide margin of safety



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous

occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 to 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* *Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRIUM®

chlordiazepoxide HCl/Roche
5mg, 10mg, 25mg capsules

**IN PAINFUL
ACUTE
CYSTITIS***

*nonobstructed;
due to susceptible
organisms



RELIEVE THE PAIN WHILE YOU ELIMINATE THE PATHOGENS.

FOR THE PAIN

- ☐ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

FOR THE PATHOGENS

- ☐ **Effective control of susceptible pathogens** such as *E. coli*, *Klebsiella-Aerobacter*, *Staph. au-*

reus, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

Appropriate antibacterial therapy: Up to 3 days therapy with Azo Gantrisin 4 to 6 tablets *Stat.*, then 2 tablets *q.i.d.*; then 11 days with Gantrisin (sulfisoxazole) may be considered.

AZO GANTRISIN®

(50 mg phenazopyridine HCl and 0.5 Gm sulfisoxazole)

Before prescribing, please consult complete product information, a summary of which follows.

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

Important Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity, pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia.

Allergic reactions: Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, periph-

eral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

November 1975
R.I. Medical Journal

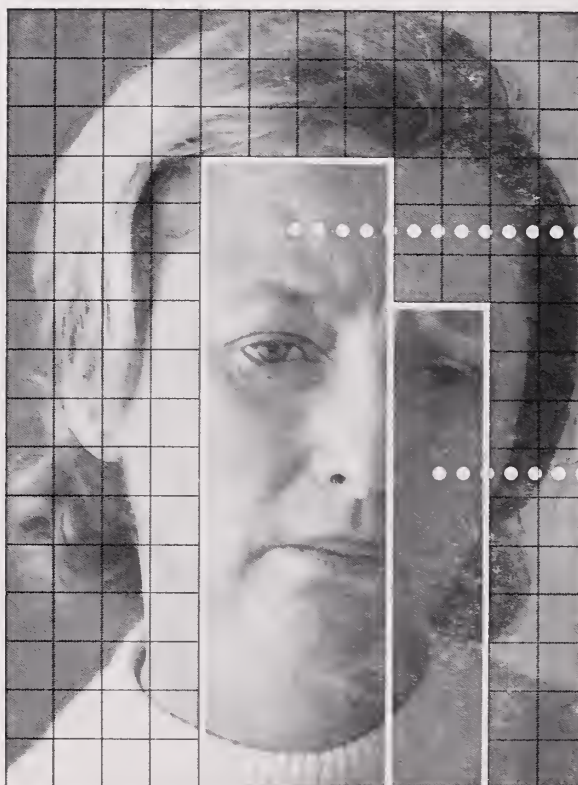
Vol. 58 No. 11

Rhode Island

BALCONY



Both often



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®] (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider the fully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors or other antidepressants may potentiate sedation. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

NOVEMBER, 1975

VOLUME 58, No. 11

EDITORIAL STAFF

Editor-in-Chief	Seebert J. Goldowsky, M.D.
Managing Editor	Timothy B. Norbeck
Ass't Managing Editor	Nancy Jo Cerep
Managing Editor Emeritus	John E. Farrell, Sc.D.

EDITORIAL BOARD

John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
John A. Dillon, M.D., Acting Chairman	*Robert V. Lewis, M.D.
Stanley M. Aronson, M.D.	Peter L. Mathieu, M.D.
Bertram H. Buxton, Jr., M.D.	Jay M. Orson, M.D.
Robert P. Davis, M.D.	Henry T. Randall, M.D.
Herbert Fanger, M.D.	Guy A. Settipane, M.D.

*On Sabbatical

TABLE OF CONTENTS

MYOCARDIAL REVASCULARIZATION FOR PATIENTS WITH UNSTABLE ANGINA PECTORIS

K.E. Karlson, M.D., A.S. Most M.D., G.N. Cooper, Jr., M.D.,
R.S. Riley, M.D., K.B. Nanian, M.D., R.D. Raymond, M.D.,
R.J. Capone, M.D., C.W. Cashman, M.D., and L.L. Vargas, M.D. . . . 465

AN ANTIBIOTIC UPDATE: II. NEW AMINOGLYCOSIDES AND OTHER ANTIBIOTICS

Phillip J. Rubin, M.D. and Stephen H. Zinner, M.D. 468

GARDNER'S SYNDROME AND NASAL OBSTRUCTION

Mary D. Lekas, M.D. 471

THE BATTERED AND ABUSED CHILDREN ACT OF THE STATE OF RHODE ISLAND

Hector Jaso, M.D. 474

EDITORIAL 476

EDITOR'S MAILBOX 477

PRESIDENT'S PAGE 453

AMA PHYSICIAN RECOGNITION AWARDS 454

REPORTS OF THE HOUSE OF DELEGATES 481

PERIPATETICS 486

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island. Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE, State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

CONTINUING MEDICAL EDUCATION CALENDAR

DECEMBER

- 2 THE PHYSICIAN ASSISTANT — A NEW PARTNER IN HEALTH CARE. 9:45 A.M. to 3:30 P.M., the Chrystal Room, Alumnae Hall, Brown University. For information, call Mrs. Allen, 863-2815.

Wednesdays through March 17, 1976 — BASIC SCIENCE SERIES. 1:00 P.M., 8th Floor Conference Room, Rhode Island Hospital.

JANUARY

- 6 BOARD REVIEW COURSE IN INTERNAL MEDICINE. Weekly topics will include Gastroenterology; Rheumatology; Immunology; Transplantation, Dialysis, Disorders of Bone Calcium, and Metabolism in Renal Failure; Hypertension; Fluid/Electrolytes; Glomerular Diseases; Non-Glomerular Parenchymal and Tubular Disease; Thyroid Disorders; Parathyroid and Metabolic Bone Disease; Adrenal Disorders; Pituitary, Hypothalamic and Gonadal Disorders; Cardiology; Oncology (Solid Tumors); Pulmonary Diseases; Infectious Diseases; Neurology; Diabetes Mellitus; Lipid Disorders and Cardiomyopathy; Red Blood Cells; Platelets and Coagulation; White Blood Cells. Tuesdays, 7:00 P.M.-9:00 P.M., George Auditorium, Rhode Island Hospital. Registration fee is \$75.00 for residents, \$100.00 for practicing physicians. For information contact Mrs. Allen, 863-3337.
- 14 ADVERSE DRUG REACTIONS: A COMMUNITY HEALTH PROBLEM. Speakers are: Herschel Jick, M.D., Associate Professor of Medicine, Boston University Medical Center; Daniel L. Azraioff, M.D., Professor of Medicine and Pharmacology, University of Kansas Medical Center; Parker Staples, M.D., Assistant Professor of Medicine, Brown University. Also, William H. Golod, Ph.D., Dean, School of Pharmacy, Medical University of South Carolina; Irving Beck, M.D., Lecturer in Medicine, Brown University; Norman A. Campbell, J.D., M.D., Chairman, Department of Pharmacy Administration, University of Rhode Island. Sponsors are the Brown University Program in Medicine, the University of Rhode Island College of Pharmacy, and Rhode Island Health Science and Educational Council. Registration fee is \$20, lunch included. The deadline is December 30, 1975. For information contact Mrs. Allen, 863-3337.
- 16 IRON DEFICIENCY ANEMIA IN INFANCY AND CHILDHOOD. Howard Pearson, M.D., Professor and Chairman, Department of Pediatrics, Yale University School of Medicine. 10:30 A.M., Kay Auditorium, Roger Williams General Hospital.

COMING EVENTS

FEBRUARY

- 13 CLINICAL ACID-BASE PHYSIOLOGY AND PARENTERAL NUTRITION AND RENAL DISEASES. James C. M. Chan, M.D., Associate Professor, Department of Child Health and Development, George Washington School of Medicine, Kay Auditorium, Roger Williams General Hospital, 10:30 A.M.
- 18 PERSPECTIVES IN GENETICS AND GENETIC COUNSELLING. Topics to be covered include: "Intra-Uterine Diagnosis," Henry L. Nadler, M.D., Given Research Professor, Northwestern University; "Screening of Inherited Metabolic Disorders," Charles R. Scriver, M.D., Professor of Pediatrics, Associate Professor of Genetics, McGill University; "Tay-Sachs Disease: Rhode Island's Screening Program," Daniel P. Perl, M.D., Assistant Professor of Pathology and Laboratory Medicine, Brown University; "Problems of Parents Whose Children Have Metabolic and Genetic Disorders," Siegfried M. Pueschel, M.D., Assistant Professor in Pediatrics, Brown University; and "Medical Implications of Chemical Mutagenesis," Marvin S. Legator, Ph.D., Professor of Genetics (Research), Brown University. The Providence Marriott, 8:30-5:00. Registration will be \$25.00. For information call Mrs. Allen, 863-3337.

The President's Page

"The Medical Profession Is The First Discipline To Come Under Federal Regulation"

By Stephen J. Hoye, M.D.

This headline is true today, my fellow physicians! We, the lucky ones, don't have to wait for "1984"! It has come to us in 1975 — nine years ahead of schedule! Not in Britain or Austria, but right here in the USA. Not in New York or Florida or Oregon, but right here in Rhode Island.

Possibly you've been so busy practicing good medicine (which is, of course, why all of elected to enter the medical profession) that you may have missed the opportunity to ponder these three recent headlines:

1. "RIGHA purse boosted \$2.4 million"
2. "HEW Regulations deny free choice of physicians if labor unions elect an HMO"
3. "Private Carriers costs of handling health claims is almost 1/4 of Social Security Administration.

If these three headlines don't epitomize the right that the private practice of medicine has on its hands today, then I don't know what does! They remind me of a recent statement of Prime Minister Harold Wilson that the government is "committed to the maintenance of private practice." but also that "the government is committed to the abolition of private practice beds in NHS hospitals." How's that for talking out of both sides of your mouth?

Here in Rhode Island we have our tax money

being returned to our health system without any health professional having anything to say about it. Which of our patients would object to being subsidized to the tune of \$300 per year?

At the same time, the Department of Health, Education, and Welfare is issuing regulations denying to millions of union workers the "dual option" choice as between private health insurance and membership in a health maintenance organization. This option was a key element in the HMO Act approved by Congress two years ago and was strongly supported by the medical profession. How can we stand by and see our patients locked into a system which has not demonstrated its ability to stand on its own two feet without the benefit of federal handouts? Perhaps Congress may yet in its wisdom approve amendments to the HMO program that guarantee union members the choice of private health insurance.

Finally, the General Accounting Office tells us that the cost of handling a Medicare bill by the Division of Direct Reimbursement of Social Security's Bureau of Health Insurance was \$12.39. The private health insurance companies examined — Travelers, Mutual of Omaha, and the Chicago Blue Cross — on the other hand all proved to be more efficient, and the most efficient of the group was Maryland Blue Cross at \$3.55 per bill. So we

(Continued on next page)

perceive a creeping encroachment by the Federal Beauracracy, which by its own admission is administratively inefficient.

The only way we can combat this is by direct involvement in the process and with eyeball to eyeball confrontation in the courts such as the AMA has had with HEW. So I urge every physician in this state to become involved by discussing these problems and philosophies with his patients

and friends. Legislators, health planners, and "do-gooders" all sooner or later come in contact with the medical profession when they need a doctor.

We must UNITE to halt the crippling effects of federal and other governmental intervention in all aspects of medical care! It's too late to say, "What's the Medical Society and the AMA doing about it?" We're working at it, but you too must get involved.



AMA Physician Recognition Awards

The Department of Continuing Medical Education of the American Medical Association has notified the Medical Society that the following members are the recipients of the 1974 *AMA Physician's Recognition Award*.

David R. Hallmann, Barrington; Robert M. Ryan, Barrington; Robert E. Baute, Warwick; Peter C. H. Erinakes, West Warwick; Antoine Hadamard, Warwick; Thomas A. Vest, Warwick; Peter D. T. Clarisse, Portsmouth.

Kwang Won Ahn, Providence; George W. Anderson, Providence; John C. Baxter, Woonsocket; John M. Bleyer, Pawtucket; Patrick A. Broderick, Providence; Anthony G. Campo, Jr., Providence; Louis A. Colantonio, Cumberland; Enold H. Dahlgquist, Jr., Providence; Robert G. Fortin, Paw-

tucket; Louis A. Fuchs, Providence; Jose A. Galardy, Woonsocket; Wagih F. Hanna, Woonsocket; Ahmed S. Hassan, Woonsocket; Michael A. Ingall, Providence; Stephen J. Kamionek, Providence; Sadayo A. Kanaya, Providence; Harry M. Kechjian, Central Falls; James T. Kurtis, Pawtucket.

Mary D. Lekas, Providence; John J. Lury, Providence; Charles H. Mandell, Providence; Thomas S. Micolonghi, Pawtucket; Carlos Moreno, Providence; John J. O'Brien, Providence; Alton M. Paull, Pawtucket; Humberto Portilla, Pawtucket; Daniel T. Shreve, East Providence; Carol M. Silver, Providence; Sanford C. Spraragen, Providence; John M. Thorp, Central Falls; Ajit K. Chadha, Wakefield; Charles Farrell, Narragansett; Joseph J. O'Neill, Wakefield, and Frederick T. M. Leong, Westerly.



PREPARATION OF A MANUSCRIPT

Manuscripts for publication and correspondence relating to them should be sent to:

Editor, RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, Rhode Island 02903

Manuscripts should be typewritten on one side of the paper only, double-spaced, and with liberal margins. References should be placed at the end of the article and should be listed according to the order in which they are cited in the text.

References should be based on the form used in

INDEX MEDICUS giving author (co-authors up to three: et al. for more than three) with initials, title of article omitting all but first capital, title of journal, volume, first and last pages, month (week), year (e.g., Doe J, Blank RS: New approaches to . . . RHODE ISLAND MED J 92:100-110, Feb 80). Journal titles should be listed as they existed at the time of publication.

References to books, monographs, and pamphlets should indicate the author(s), title, publisher's name, place and date of publication, edition, and page number of the reference.

LEADERS IN AMERICAN MEDICINE

FILMS AND DISCUSSIONS WITH THESE DISTINGUISHED PHYSICIANS

Francis A. Countway Library of Medicine
10 Shattuck Street
Boston, Massachusetts 02115

Sponsored by Boston University School of Medicine, Benjamin Waterhouse Medical History Society, Boston Medical Library, Brown University Medical School, and Tufts Medical School, this multi-institutional film and discussion program is under the chairmanship of G.E. Gifford, Jr., M.D., Associate Professor of Socio-Medical Sciences, Boston University School of Medicine, Consultant to the Historical Collections, Francis A. Countway Library of Medicine, Secretary, Board of Trustees, Boston Medical Library.

Wednesday, February 11, 1976

CHARLES B. HUGGINS

Wednesday, March 10, 1976

JOSEPH T. WEARN

Thursday, April 8, 1976

GEORGE L. ENGEL

Wednesday, May 12, 1976

GEORGE W. CORNER

These films were produced by Alpha Omega Alpha and the National Library of Medicine as part of a series, *Leaders in American Medicine*, the *Autobiographical Memoirs of Eminent Medical Scientists and Teachers*.

This program was made possible by a grant from the Josiah Macy, Jr. Foundation to the Section in History of Medicine, Boston University School of Medicine.

Refreshments will be served before each program at 4:00 P.M. The film and discussion program will begin at 4:30 P.M.

Doctor Gifford will answer questions about this program. Mail should be directed to him at the Francis A. Countway Library of Medicine. Doctor Gifford's telephone number is 354-1415.

NOTES ON THE WOMAN'S AUXILIARY TO THE PROVIDENCE MEDICAL ASSOCIATION 1974-1975

The Auxiliary met three times during the year. The activities were both social and educational — meeting the purposes and objectives of the organization.

One of the prime purposes is to promote Health Education. In that pursuit, a group of fifteen women went to twelve nursery schools in teams of three to conduct a Pre-School Eye Screening Program. Three hundred children were screened during the year. Also, a group of twenty women enrolled in a Cardio-Pulmonary Resuscitation Course sponsored by the Rhode Island Heart Association. The Auxiliary plans to continue this activity in the future.

The Auxiliary raised \$417.15 to be given to the AMA-ERF Fund.

As its major project this year, the Auxiliary sponsored a scholarship for a Medical Student. The scholarship was awarded to Reginald Fowler, a graduate of Brown University and presently a second year honor student at Tufts Medical School. Mr. Fowler was presented a check for \$600 at the Annual Meeting of the Woman's Auxiliary to the Providence Medical Association.

MRS. DANIEL CALEDA
President

NATHAN CHASET, immediate past President of the Rhode Island Medical Society, was recently installed as the President of the New England Section of the American Urological Association. The ceremonies were held at New England Section meeting in Montreal, Canada.



REGINALD FOWLER
Recipient of Medical Student Scholarship

The **First American-German Post-Graduate Medical Congress** will take place between December 26, 1975 and January 9, 1976 at the Holiday Inn in Nassau followed by a Caribbean cruise. Fifteen qualified University Professors from the United States and Germany, all bilingual, will participate in teaching seminars recommended for practicing physicians, internists, cardiologists, family physicians.

Further details may be obtained by writing to:

S. Heyden, M.D.

Department of Community Health
Sciences

Duke University Medical Center
Durham, North Carolina 27710



Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."^{1,2}

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP

100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

**Fire fighter
for arthritic
flare-ups.**

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.
Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpre-

dictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage, if edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemeses, dys-

pepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

HOME FOR THE HOLIDAYS WITH HOME CARE

GIVE your patients the JOY of spending the HOLIDAYS at home with their families while still receiving your specialized care. They will GIVE you THANKS.

To arrange for HOME CARE, just request Home Care referral on your patient's hospital chart, or contact the hospital Social Services Department, or

CALL 521-2633

Home Care Services are covered by Blue Cross and/or Medicare.

WILLIAM C. HARVEY
Director

RUSSELL P. HAGER, M.D., Ph.D.
Medical Director



157A WATERMAN STREET

PROVIDENCE, RHODE ISLAND 02906

**We have a
specialty too.**

**Office
interiors.**



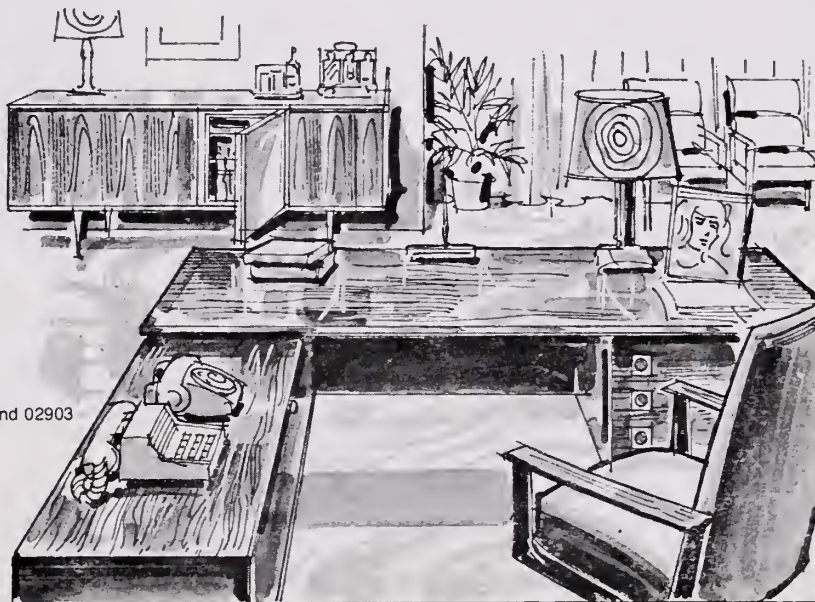
ROITMAN & SON, INC.

Fine Furniture and Accessories

161 South Main Street, Providence, Rhode Island 02903
Telephone (401) 861-6010

Open Monday and Thursday evenings until 9.
Convenient terms • Free parking
Delivery arranged beyond local area.

We plan and furnish professional offices of any size, from the carpet up. Our professional interior designers work with you or with your architect. Our people are not only highly talented, they are experienced. Furnishing your office can be one thing you don't have to worry about. Just call us. 861-6010.



The Pain Phone

When a telephone prescription for pain relief is necessary or convenient, you can call in your order for Empirin Compound with Codeine in 45 of the 50 states† That includes No. 4, which provides a full grain of codeine for more intense, acute pain.

† The exceptions:
Alaska, Arizona, Maine,
Oregon, Rhode Island, and
the District of Columbia.

EMPIRIN[®] COMPOUND c CODEINE

No. 4 codeine phosphate*
(64.8 mg) gr 1

No. 3 codeine phosphate*
(32.4 mg) gr ½

Each tablet also contains aspirin
gr 3½, phenacetin gr 2½, *
caffeine gr ½.

* Warning—may be habit-forming.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue
(Jct. No. Main St.)

Providence, R. I. 02904
GAspee 1-5228

HEALTH HAVENS

**A SKILLED NURSING HOME
MEDICARE PARTICIPATING**



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence
Tel. 438-4275

JCAH Accredited

Pretend it's 1961. Would you invest in Chateau Latour?



Did you see the article about the man who bought the fancy French wine 10 or 12 years ago at \$1.50 a bottle, and now it's worth so much he can't drink it?

Well, it's true.

If you had the specialized knowledge and insight it takes to invest in wines, you could have made a killing between 1961 and 1974. But, most likely, you didn't. Because common sense told you not to try unless you knew what you were doing.

The same principle applies equally well to other kinds of investments. There are no substitutes for the knowledge and insight that come from thorough research and years of professional experience.

If this principle is true for professional money managers in general, it's especially true for Industrial National's Trust Department. We've got the people, the philosophy and the organization needed to make your money grow.

In fact, we'll gladly match the growth record of the investments we manage against anybody else's.

To find out more, give us a call. Ask for Mr. Evans at 278-6607. He'll show you how easy it is to make the necessary arrangements. And you'll probably find that the service costs much less than you think.

Trust & Investment Division,
Industrial National Bank, 100
Westminster Street, Providence,
Rhode Island 02903

IN BANK

Industrial National Bank

Something extra in Investment Management.

Hopkins

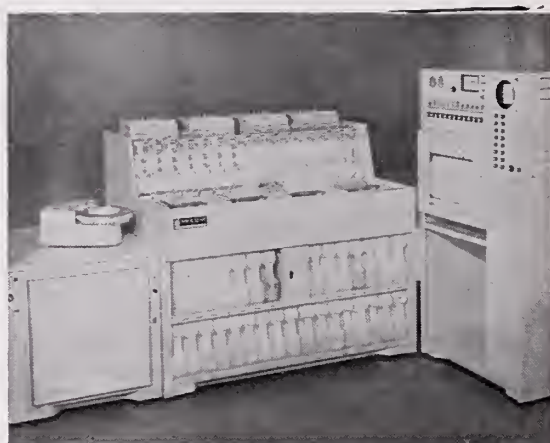
Profile "20"

Results in Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES
\$15.00



Hopkins Medical Laboratory

335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

ANGELO VITICONTE, A. B. M. T.
DIRECTOR

ASCANIO DI PIPPO
Ph. D

DONALD MATTERA
B.S. M.T. (ASCP)

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

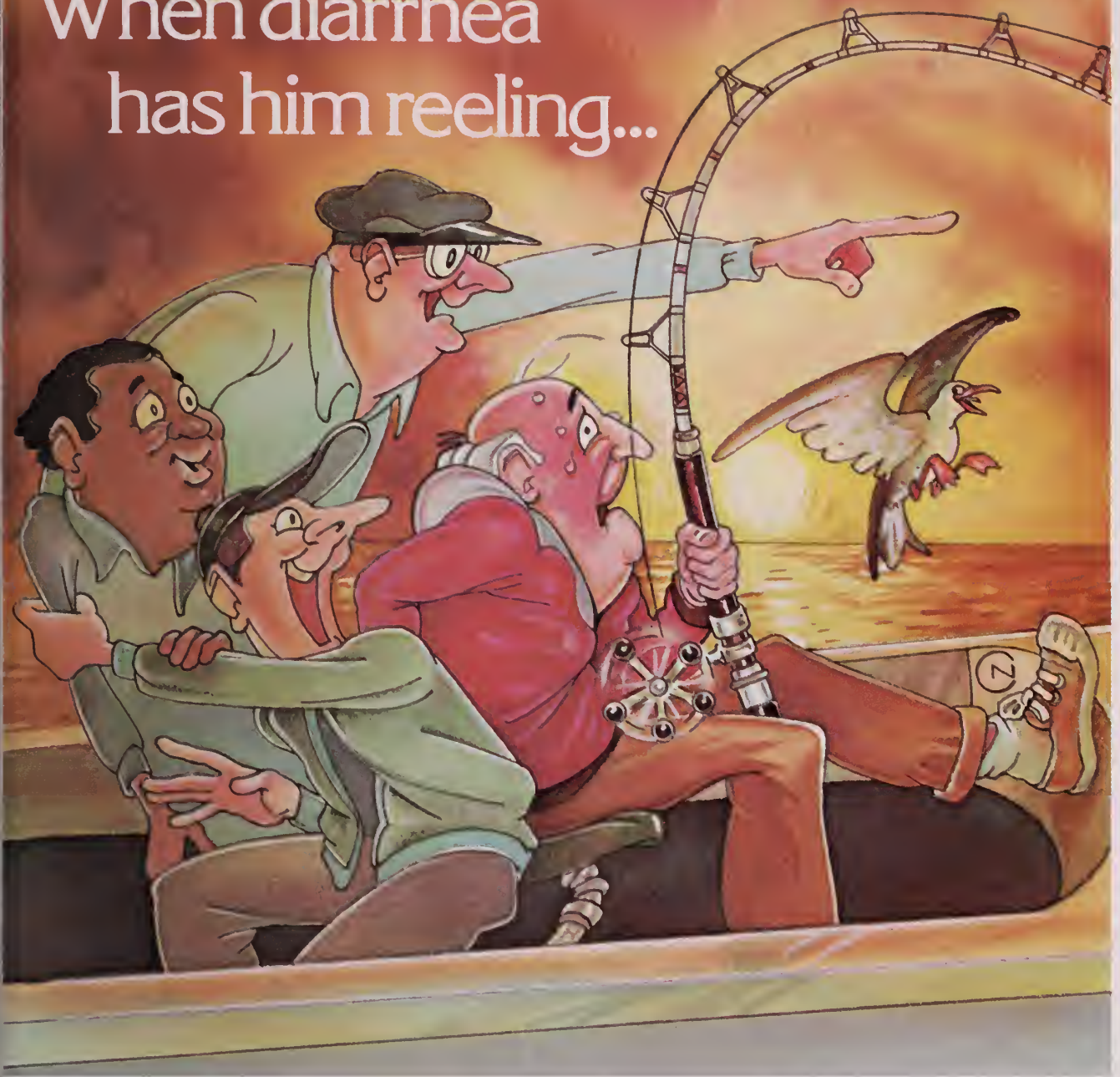
Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

When diarrhea has him reeling...



Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and

fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil[®]

TABLETS LIQUID

holds the line.

Each tablet and each 5 ml of liquid contain diphenoxylate hydrochloride 2.5 mg (Warning: May be habit forming) atropine sulfate 0.025 mg

In hypertension,

ALDOMET[®] (METHYLDOPA|MSD)
usually offers more
than effective lowering
of blood pressure...



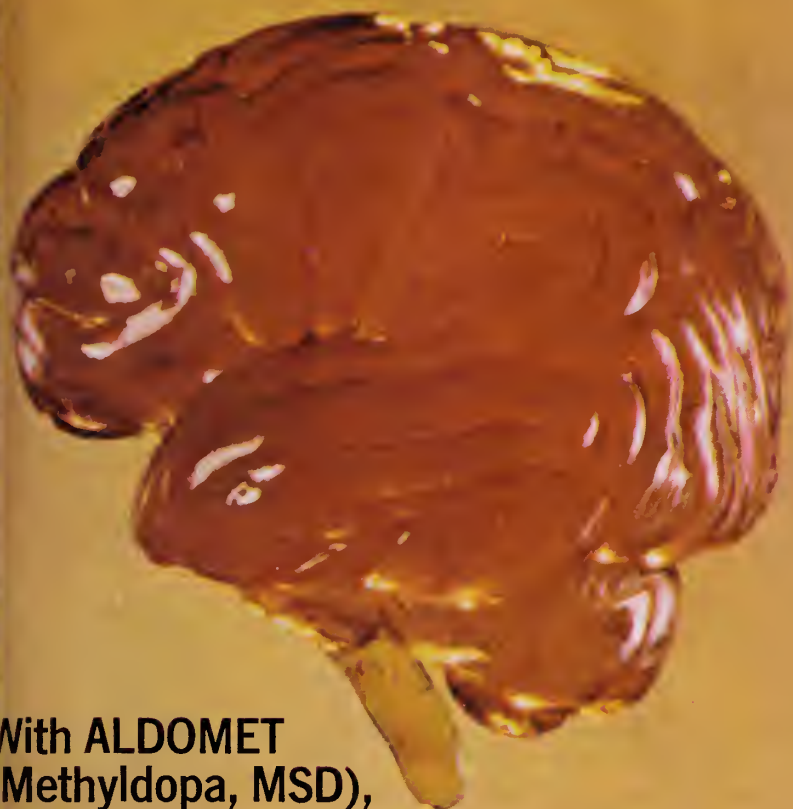
**With ALDOMET
(Methyldopa, MSD),
existing renal function
is usually unchanged**

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.



**With ALDOMET
(Methyldopa, MSD),
cardiac output is
generally unchanged**

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.



MSD
MERCK
SHARP
DOHME

addendum

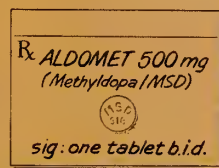
to further
simplify therapy
for many patients

now available
ALDOMET[®] 500 mg
(METHYLDOPA | MSD)

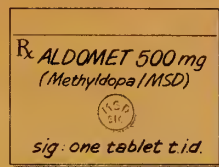
- often more practical to prescribe
- easier for patients to remember

Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day. Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

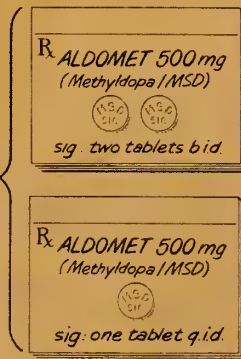
1.0-g
daily
dose =



1.5-g
daily
dose =



2.0-g
daily
dose =



NOTE: Tablets shown are not actual size.

MSD
MERCK
SHARP
DOHME

With ALDOMET
(Methyldopa, MSD),
symptomatic postural
hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for hypertension

TABLETS, 250 mg, 500 mg, and 125 mg

ALDOMET[®]
(METHYLDOPA | MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders. It is not recommended in pheochromocytoma.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

or a brief summary of prescribing information, please see following page.

in hypertension

ALDOMET[®] (METHYLDOPA|MSD)

usually lowers blood pressure effectively



Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or

cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebral disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by dialysis procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including night terrors and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease in blood pressure on standing). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatulence, diarrhea, mild dryness of mouth or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia, leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast engorgement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema, lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensive other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Hypertension in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 500; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100. For more detailed information, consult your representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

MALPRACTICE QUESTIONS

**Depend on Starkweather & Shepley
for the answers and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.



ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

155 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association



LEARY LABORATORY

EKG: This service is now available by appointment on house calls and at our 189 Governor St. Laboratory.

Profile 11: A new inexpensive grouping of the procedures that physicians in this area frequently order to obtain a general profile of their patients, without appointment. The fee is \$16.50 which includes the following tests:

Albumin	Alk. Phos.
Glucose	Cholesterol
BUN	Uric Acid
Calcium	Total Protein
LDH	Total Bilirubin
SGOT	Phosphate

Triglycerides

T4

Hemogram

(RBC, WBC, Hematocrit,
Hemoglobin, MCV, MCH, MCHC)



LEARY LABORATORY, INC.

43 Bay State Road, Boston, MA 02215

THREE PROVIDENCE LOCATIONS

655 Broad St. — 7:30-5:00 Mon.-Fri.
189 Governor St. — 9:00-5:00 Mon.-Fri.
111 Plain St. — 9:00-5:00 Mon.-Fri.
9:00-11:00 Saturday

NOTICE

ALL PHYSICIANS IN RHODE ISLAND!!
CHANGING ECONOMIC CONDITIONS,
INCREASING LOSS RATIOS
and

INSUFFICIENT PREMIUM RESERVES
ARE BEGINNING TO BRING ABOUT
DRASTIC CHANGES

in

NATIONAL AND REGIONAL
ASSOCIATION GROUP DISABILITY
INCOME POLICIES!!

Those Members who would like further information of the impending problems of "Mail-Order" Insurance which lie just ahead may obtain further information by contacting us via 'phone or mail

— NO OBLIGATION —

R. A. DESROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

FOR SALE

Home and Professional Office

Garden City area, Cranston, R. I.

FOR DOCTOR — DENTIST — OR LAWYER

First Floor — Large Waiting Room, Four Offices, Receptionist Area and Lavette

Second Floor — Living Room, 3 Bedrooms, Appliance Kitchen, Full Bathroom.

Ample Parking

Many Extras

Shown by Appointment by Owner

CALL 944-0605

DYAZIDE

MAKES SENSE

® Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F) and 25 mg. of hydrochlorothiazide.

Trademark

**TRIAMTERENE CONSERVES POTASSIUM
WHILE HYDROCHLOROTHIAZIDE
LOWERS BLOOD PRESSURE**

**FOR LONG-TERM CONTROL
OF HYPERTENSION***

Serum K⁺ and BUN should be checked periodically. (See Warnings Section.)



Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Warning

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has

been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and

BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

AMA's Clinical Convention Flies to Hawaii !!

In addition to postgraduate courses, timely medical subjects will be offered each day in state-of-the-art lectures and symposia.

Advance Registration AMA Clinical Convention HONOLULU, HAWAII November 30-December 5

SCIENTIFIC COURSES

Monday-Wednesday, Dec. 1-3/7:30-9:00 AM (4½ hour, 3-day course: \$45)

1. Dermatology for Non-Dermatologists
2. Evaluation of the Unconscious Patient
3. Hyperlipidemia
4. Infectious Diseases in Children
5. Management of Adolescent Problems
6. Newer Antibiotics
7. Newer Concepts of Family Planning
8. Office Management of Sexual Difficulties
9. Peripheral Vascular Disease—Diagnosis and Treatment
10. Pulmonary Function Tests and Blood Gases

Monday-Wednesday, Dec. 1-3 (Numbers 1-10)

1st Choice # _____; 2nd Choice # _____; 3rd Choice # _____

Monday-Wednesday, Dec. 1-3/10:30 AM-Noon (4½ hour, 3-day course: \$45)

11. Acid-Base, Fluid and Electrolyte Balance
12. Advanced Electrocardiography
13. Critical Patients—Critical Decisions
14. Normal and Abnormal Uterine Bleeding
15. Office Management of Anorectal Disorders
16. Office Practice of Gynecology
17. Physicians' Marriages
18. Special Problems of Child Abuse
19. Surgical Lesions of the Intestines—Diagnosis and Treatment
20. Treatment of Common Pediatric Allergies

Monday-Wednesday, Dec. 1-3 (Numbers 11-20)

1st Choice # _____; 2nd Choice # _____; 3rd Choice # _____

Thursday-Friday, Dec. 4-5/7:30-10:30 AM (6 hours for total course; 3 hours on Thursday, 3 hours on Friday: \$60)

21. Acid-Base, Fluid and Electrolyte Balance (repeat)
22. Basic Electrocardiography
23. Birth Defects and Clinical Genetics
24. Dermatology for Non-Dermatologists (repeat)
25. Fetal Monitoring
26. Ophthalmoscopy for the Non-Ophthalmologist
27. Pediatric Cardiology
28. Pitfalls of Emergency Room X-Rays
29. Office Endocrinology
30. Immunology—1976
31. The Uterine Pap Smear

Thursday-Friday, Dec. 4-5 (Numbers 21-31)

1st Choice # _____; 2nd Choice # _____; 3rd Choice # _____

Offered Both Monday & Tuesday, Dec. 1 & 2/7:30 AM-Noon (4½-hour course: \$45)

32. Basic Life Support—Cardiopulmonary Resuscitation (Dec. 1)
33. Basic Life Support—Cardiopulmonary Resuscitation (Dec. 2)

Wednesday-Friday, Dec. 3-5/9:00 AM-Noon (9-hour course: \$90)

34. Advanced Life Support—Cardiopulmonary Resuscitation. (Prerequisite: Basic Life Support Course) (Dec. 3-5)

Courses of the AMA Committee on the Medical Aspects of Sports (Each a 3-hour course: \$30)

Monday, Dec. 1/7:30-9:00 AM & 10:30-Noon

35. The Physical Exam

Tuesday, Dec. 2/7:30-9:00 AM & 10:30-Noon

36. The Oriental Arts (Karate, Judo, Yoga)

Wednesday, Dec. 3/7:30-9:00 AM & 10:30-Noon

37. Emergency Care on the Field

Thursday, Dec. 4/7:30-10:30 AM

38. Wrestling
39. Aquatic Sports

Friday, Dec. 5/7:30-10:30 AM

40. Rehabilitation

Tuesday-Wednesday, Dec. 2-3/7:30-10:30 AM (6 hours for total course; 3 hours on Tuesday, 3 hours on Wednesday: \$60)

41. Writing for Scientific Journals

LUNCHEON ROUND TABLES

(Held in Hilton Hawaiian Village Long House Room, luncheon round tables are jointly sponsored by the AMA Auxiliary and AMA Council on Scientific Assembly. Cost: \$10.00 each.)

Tuesday, December 2 (12:15-1:45 PM) • Topic—Ancient Polynesian Medicine _____

Thursday, December 4 (12:15-1:45 PM) • Topic—Delhi Belly, Gypsy-Tummy, and Other Diseases of Travelers _____

General Registration

_____ Non-member physicians: \$35 _____ AMA members and their guests: no fee

_____ Guests of non-members: \$10 _____ Medical students, interns and residents: no fee

_____ Foreign M.D.'s: no fee

My remittance of \$ _____ is enclosed. Make check or money order payable to the American Medical Association. Payment must accompany registration.

Please print

Name _____

(Each physician must register in his own name)

Office Address _____

City/State/Zip _____

I am a member of the AMA through the following State Medical Association or government service _____

Office Phone No. _____

☐ Send travel information; or call toll-free to: (800) 621-1046, except in Alaska and Hawaii; in Illinois call (312) 782-3462

Return this form today to AMA's Dept. of Membership Statistics, 535 N. Dearborn St., Chicago, IL 60610

Plan Now To Attend

THE ANNUAL MEETING

of the

Providence Medical Association

WEDNESDAY, JANUARY 21, 1976

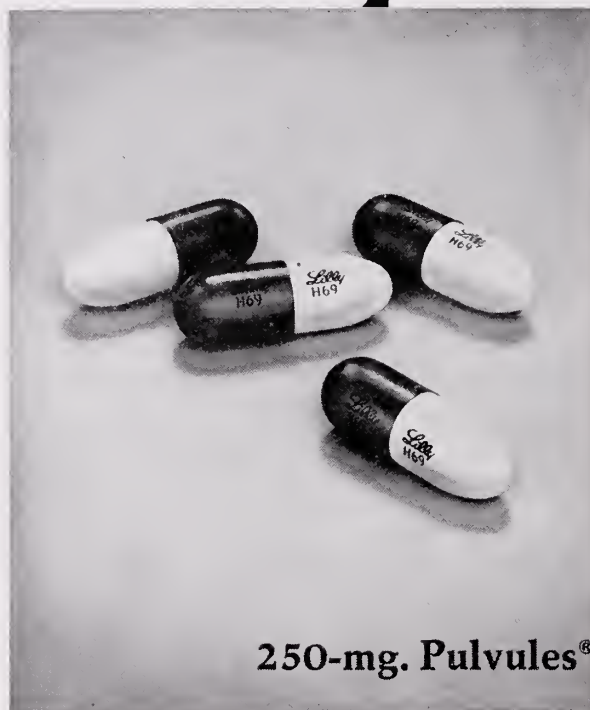
COLONIAL HILTON INN

Route 1-A, Cranston, R. I.

SOCIAL HOUR — 6:30 P.M.

DINNER — 7:30 P.M.

easy to take



Keflex®
cephalexin



500738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Myocardial Revascularization For Patients With Unstable Angina Pectoris

Surgical Treatment Results In Less Angina And Lower Long-Term Mortality Risk

By K. E. Karlson, M.D., A. S. Most, M.D., G. N. Cooper, Jr., M.D., R. S. Riley, M.D., K. B. Nanian, M.D., R. D. Raymond, M.D., R. J. Capone, M.D., C. W. Cashman, M.D. and L. L. Vargas, M.D.

Analysis of the course of patients with symptomatic coronary artery disease has revealed characteristics of these individuals who are at an increased risk of myocardial infarction and death. While the broad group of patients with stable angina pectoris has historically been considered to have an annual mortality of 3-10 per cent per year,¹⁻⁵ it has more recently been possible to classify patients on the basis of the extent and severity of their angiographically demonstrated coronary lesions. Thus Sheldon⁶ followed a group of patients with demonstrated 75 per cent or greater proximal stenosis of the coronary arteries and found that annual mortality with single vessel involvement was 3 per cent, with 2 vessel involvement 7 per cent, and with 3 vessel involvement 12 per cent per year.

Another group of patients, variously considered to have the syndrome of "pre-infarction angina," "unstable angina," or "intermediate coronary syndrome," has been shown to have an even higher risk of myocardial infarction and death. This syndrome is characterized by more frequent, prolonged, and intense anginal pain, often responding poorly if at all to nitroglycerin, associated with EKG evidence of myocardial ischemia without Q wave patterns of infarction or significant changes in serum enzymes. These patients were recognized to be at high risk for many years⁷⁻⁹ even prior to angiographic demonstration of the extent of coro-

nary artery disease. Several groups of patients have now been followed after documentation of their disease (Table I). Of particular interest is a prospective randomized study¹⁰ in which patients with the intermediate coronary syndrome (recurrent angina pectoris, prolonged and intense and not related to effort, without evidence of myocardial infarction), who received medical management, experienced a 35 per cent mortality during a mean follow-up period of 8 months.

Variant (Prinzmetal) angina also falls into a high risk group. A one year mortality of 16 per cent has been reported for a large group of patients²⁴ and a 33 per cent mortality in that subgroup which has angina at rest.²⁵ Both variant angina and persistent angina at rest are treated according to the same general plan. Patients who continue to experience little relief despite optimal medical management are evaluated by coronary angiography. The presence of critical proximal stenosis of major coronary arteries is an indication for aortocoronary bypass.

Patients with the intermediate coronary syndrome have been considered for surgery at this institution since 1972. This report summarizes our surgical experience with such patients. Because variant angina may also be produced by coronary artery spasm and is frequently poorly responsive to coronary bypass surgery, only those patients with fixed stenoses are included in this report.

MATERIALS AND METHODS

This report deals with our total experience with

(Continued on next page)

From the Rhode Island Hospital, Providence, Rhode Island.

TABLE I
NON-SURGICAL MANAGEMENT OF UNSTABLE ANGINA

Author	Av. follow-up	No. of cases	Mort. (%)	Non-fatal M.I. (%)	Angina Free (%)	Angina Improved (%)
Bertolasi, et al ¹⁰	8 mo.	20	35	....	*	....
Fischl, et al ¹¹	32 mo.	9	33	0	11	55
Goodin, et al ¹²	3 mo.	7	42	28	0	0
Scanlon, et al ¹³	12 mo.	22	71	59	19	19
Conti, et al ¹⁴	10 mo.	10	10	10	10	60

*Clinical status of medically treated patients inferior to surgically treated.

the surgical treatment of patients with unstable angina including intermediate coronary syndrome and Prinzmetal angina with fixed obstructive lesions. Some of these patients had recurrent ventricular tachycardia or fibrillation uncontrollable with drug therapy. The angina is accompanied by ST or T wave changes of myocardial ischemia, but without Q wave changes or serum enzyme changes indicative of myocardial infarction. Those patients who have variant angina, characterized by ST elevations in the electrocardiogram, and otherwise fulfilling the criteria of intermediate coronary syndrome are also included in the group.

These patients have been studied by cardiac catheterization and angiocardiology and significant lesions of at least 75 per cent narrowing of proximal major coronary arteries have been demonstrated. They have been operated upon, and aortocoronary bypass has been done to bypass the stenoses of all of the major coronary arteries for which it is technically feasible. In those patients in whom angina, electrocardiographic changes, or arrhythmias were particularly severe, intraaortic balloon assist has been used either during cardiac catheterization or aortocoronary bypass, or both.

The patients have been followed since the time of their operations, the longest follow-up being 34 months and the median 12 months.

RESULTS

Twenty-four patients were operated upon on an urgent basis for medically uncontrollable angina

TABLE II
SURGICAL RESULTS OF AORTOCORONARY BYPASS FOR UNSTABLE ANGINA

Number of Cases	24
Hospital Deaths	1*
Long Term Follow-up:	
Free of angina	20
Angina markedly improved	3
Recurrent angina	1**
Myocardial infarction	0

*Operative myocardial infarction.

**After angina-free interval of 6 months.

(Table II). There was one hospital death, from massive intraoperative myocardial infarction. There have been no late instances of myocardial infarction or death during the follow-up period.

Twenty patients have been free of angina since operation. Three patients are free of angina except on rare instances. One additional patient has had recurrence of angina after angina-free interval of six months. Therefore, of those patients surviving operation, 96 per cent are improved, with 83 per cent free of angina and an additional 13 per cent markedly improved.

DISCUSSION

Aortocoronary bypass has proved to be feasible therapy for patients with unstable angina, including those with variant angina. Patients who are operated upon are subject to lesser risk than patients treated without operation. Our 4 per cent mortality for emergency or urgent operation is comparable to that reported by others (Table III). Similarly, symptomatic improvement in surgically treated patients is striking, and the long term mortality is low (Table IV). In addition, no patient has experienced a new myocardial infarction in the follow-up period.

TABLE III
OPERATION FOR UNSTABLE ANGINA
IMMEDIATE RESULTS

Author	No. of Cases	Op. Mort. (%)
Karlson, et al	24	4
Scanlon, et al ¹³	39	10
Miller, et al ¹⁴	67	10
Segal, et al ¹⁵	17	12
Traad, et al ¹⁶	60	2
Conti, et al ¹⁷	40	15
Cheanevechai, et al ¹⁸	63	6
Goodin, et al ¹²	12	8
Bolooki, et al ¹²	42	0
Weintraub, et al ²⁰	16	6
Hill, et al ²¹	17	6
Wisoff, et al ²²	77	1
Bonchek, et al ²³	55	5
Bertolasi, et al ¹⁰	57	7

TABLE IV
Operation for Unstable Angina Syndrome
Follow-up Results After Hospital Discharge

Author	Angina Free %	Angina Improved %	Late M.I. %	Late Deaths %	Follow-up Mo.
Scanlon, et al ¹³	59	30	25	2	1-21
Miller, et al ¹⁴	78	9	10	3	7 mean
Segal, et al ¹⁵	93	7	—	—	12-18
Traad, et al ¹⁶	77	11	8	5	1-36
Conti, et al ¹⁷	68	29	3	0	17 mean
Cheanvechai, et al ¹⁸	93	7	—	0	1-30
Goodin, et al ¹²	42	58	0	0	8-13
Bolooki, et al ¹⁹	98	—	0	0	6-54
Weintraub, et al ²⁰	87	13	6	0	1-20
Hill, et al ²¹	94	—	6	6	1-24
Wisoff, et al ²²	91	8	1	0	14 mean
Bonchek, et al ²³	45	53	6	2	12-52
Bertolasi, et al ¹⁰	*	—	—	0	8 mean
Karlson, et al	83	13	0	0	1-34

*"Improved clinical results" in surgically treated patients compared with medically treated.

The management of 17 of our patients was greatly facilitated by the use of intraaortic balloon counterpulsation. The intraaortic balloon was inserted to stabilize patients prior to catheterization, or operation, or both. Counterpulsation reduces the left ventricular afterload. It also increases aortic pressure during diastole, thereby increasing coronary perfusion. In our experience patients with uncontrollable ventricular arrhythmias, or sustained angina at rest, or both are uniformly improved with counterpulsation, after which cardiac catheterization and operation may be undertaken under more stable conditions.

SUMMARY AND CONCLUSIONS

1) Aortocoronary bypass surgery has been performed on 24 patients with unstable anginal syndromes, with an operative mortality of 4 per cent (one patient).

2) Post-operatively 83 per cent of patients are free of angina, and an additional 13 per cent are markedly improved.

3) Surgical therapy is indicated in patients refractory to medical management.

4) Patients who are treated surgically have less angina than medically treated patients, as well as lower long-term mortality risk.

REFERENCES

- ¹Parker RL, Dry TJ, Willius FA, et al.: Life expectancy in angina pectoris. *JAMA* 131:95-100, 11 May 46
- ²Block WJ Jr, Crumacker EL, Dry TJ, et al.: Prognosis of angina pectoris: observations in 6,882 cases. *JAMA* 150:259-64, 27 Sep 52
- ³Weinblatt E, Frank CW, Shapiro S, et al.: Prognostic factors in angina pectoris—a prospective study. *J Chronic Dis* 21:231-45, Jul 68
- ⁴Zukel WJ, Cohen BM, Mattingly TW, et al.: Sur-

vival following first diagnosis of coronary heart disease. *Am Heart J* 78:159-70, Aug 69

⁵Kannel WB, Feineib M: Natural history of angina pectoris in the Framingham study. *Am J Cardiol* 29:154-63, Feb 72

⁶Sheldon WC, Rincon G, Effler DB, et al.: Vein graft surgery for coronary artery disease. *Circulation* 48 Suppl 3:184-9, Jul 73. Survival and angiographic results in 1,000 patients.

⁷Beamish RE, Storrie VM: Impending myocardial infarction. Recognition and management. *Circulation* 21:11-7-15, Jun 60

⁸Wood P: Acute and subacute coronary insufficiency. *Brit Med J* 1:1779-82, 24 Jun 61

⁹Vakil RJ: Preinfarction syndrome—management and followup. *Am J Cardiol* 14:55-63, Jul 64

¹⁰Bertolasi CA, Tronge JE, Carreno CA, et al.: Unstable angina—prospective and randomized study of its evaluation, with and without surgery. *Am J Cardiol* 33:201-8, Feb 74

¹¹Fischl SJ, Herman MV, Gorlin R: The intermediate coronary syndrome: clinical, angiographic, and therapeutic aspects. *N Engl J Med* 288:1193-8, 7 Jun 73

¹²Goodin RR, Inglesby TV, Lansing AM, et al.: Preinfarction angina pectoris. A surgical emergency. *J Thorac Cardiovasc Surg* 66:934, 42 Dec 73

¹³Scanlon PJ, Nemickas R, Moran JF, et al.: Accelerated angina pectoris. Clinical, hemodynamic, arteriographic, and therapeutic experience in 85 patients. *Circulation* 47:19 26, Jan 73

¹⁴Miller DC, Cannon DS, Fogarty TJ, et al.: Saphenous vein coronary artery bypass in patients with "pre infarction angina." *Circulation* 47:234-41, Feb 73

¹⁵Segal BL, Likoff W, Brock, Hvanden, et al.: Saphenous vein bypass surgery for impending myocardial infarction. *JAMA* 223:767-72, 12 Feb 73

¹⁶Traad EA, Larsen PB, Gentsch TO, et al.: Surgical management of the preinfarction syndrome. *Ann Thorac Surg* 16:261-72, Sep 73

¹⁷Conti CR, Brawley RK, Griffith LS, et al.: Unstable angina pectoris: morbidity and mortality in 57 consecutive patients evaluated angiographically. *Am J Cardiol* 32:745-50, Nov 73

¹⁸Cheanvechai C, Effler DB, Loop FD, et al.: Emer-

(Continued on page 478)

An Antibiotic Update: II. New Aminoglycosides And Other Antibiotics

The Use Of The New Potent Antibiotics Should Be Limited To Clear-Cut Indications

By Phillip J. Rubin, M.D. and Stephen H. Zinner, M.D.

The nature of clinical practice of infectious diseases has changed dramatically during the past decade. Prior to the antibiotic era infections due to Gram-positive cocci such as the pneumococcus and *Staphylococcus aureus* were encountered more frequently. With the introduction of antimicrobial therapy a shift has occurred: first it was in the direction of the penicillin-resistant staphylococci; more recently it has been reflected in a striking increase in the frequency of serious infections due to Gram-negative bacilli.¹ Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and other bacilli have achieved new prominence in today's medical practice. The aminoglycoside antibiotics (streptomycin, neomycin, kanamycin, gentamicin, and tobramycin) have been introduced in succession in an attempt to meet the emergence of these infecting organisms.

THE AMINOGLYCOSIDES

1. *Streptomycin* — (Streptomycin Sulfate—Lilly, Pfizer, Wyeth)

PHILLIP J. RUBIN, M.D., *Fellow, Infectious Diseases, Brown University Program in Medicine.*

STEPHEN H. ZINNER, M.D., *Assistant Professor of Medical Sciences; Head, Sub-section of Infectious Diseases, Section of Medicine, Brown University; and Head, Division of Infectious Diseases, Roger Williams General Hospital.*

This is one of a series of papers supported by the Continuing Education Program of the Rhode Island Health Science Education Council. Part I of AN ANTIBIOTIC UPDATE appeared in the Rhode Island Medical Journal issue of February, 1975.

Streptomycin was the earliest aminoglycoside introduced. This antibiotic is active against some Gram-positive organisms as well as some facultative Gram-negative enteric bacilli with the exception of *Pseudomonas*. The usefulness of streptomycin is limited today by the relatively rapid development of resistance. At the present time streptomycin is used primarily in the treatment of tuberculosis, tularemia, and brucellosis. Streptomycin as well as other aminoglycosides in combination with penicillins provides synergistic activity in the treatment of endocarditis due to enterococci (e.g., *Streptococcus fecalis*). Similarly, all aminoglycosides may increase the bacterial activity of penicillins against sensitive strains of *Staphylococcus aureus* in serious infections.²

2. *Kanamycin* — (Kantrex® — Bristol Laboratories)

With the exception of *Pseudomonas aeruginosa*, most Gram-negative enteric bacilli are sensitive to kanamycin. Some strains of *Staphylococcus aureus* are sensitive to this drug, but pneumococci (*Streptococcus pneumoniae*), *Streptococcus viridans*, *Streptococcus fecalis*, and Clostridia species are resistant.³ As with the other aminoglycosides, kanamycin in combination with a penicillin is synergistic for endocarditis or other infections caused by *Streptococcus fecalis*.

The major indications for kanamycin include pneumonia due to *Klebsiella pneumoniae*, pyelonephritis or bacteremia due to sensitive Gram-negative enteric bacilli, and chronic bacteriuria where drugs

with lesser toxicity have failed to eradicate the organism. Kanamycin is useful in combination with penicillins, chloramphenicol, or erythromycin in the treatment of intra-abdominal sepsis or endometritis where the likelihood of *Pseudomonas* infection is not high. It is occasionally used orally for bowel sterilization. As with all aminoglycosides, alkalization of the urine will increase the activity of kanamycin in these infections. The serum half-life of kanamycin is 3 to 4 hours, and most of the drug is excreted unchanged in the urine. The dosage of kanamycin is 15 mg/kg per day usually given intramuscularly in two divided doses, but intravenous use may be indicated in the presence of circulatory collapse. As with all aminoglycosides, as discussed under gentamicin, the dose must be decreased in the face of renal insufficiency.

3. Gentamicin — (Garamycin® — Schering)

Gentamicin was introduced for clinical use in 1969 and was the first aminoglycoside with significant activity against *Pseudomonas aeruginosa*. Most of the facultative Gram-negative bacilli (e.g., *E. coli*, *Klebsiella*, *Proteus*) are also inhibited *in vitro* as are most strains of *Staphylococcus aureus*.⁴ Other Gram-positive organisms are variably sensitive to gentamicin, but *Streptococcus fecalis*, *Streptococcus pneumoniae*, Group B Streptococci, and many others are resistant to gentamicin alone at levels usually achievable clinically.

Gentamicin is available commercially as a sulfate salt. Its serum half-life is 2.5 to 3.5 hours in patients with normal renal function. Administration of gentamicin is usually in amounts of 5 mg/kg per day in three divided doses either intramuscularly or intravenously (in 150 ml 5 per cent dextrose and water run in over 1 to 2 hours). This dosage usually results in serum levels of 4 to 8 ug/ml which generally exceeds the minimal inhibitory concentration for most of the pathogens mentioned above. In patients with renal impairment, adjustment in dosage is necessary due to the fact that gentamicin as well as all other aminoglycosides are almost completely excreted by the kidney. Several methods have been advocated for administration of aminoglycosides in the presence of renal failure. The most accurate method is for the physician to increase or decrease the dosage as a result of monitoring the serum levels of gentamicin. This may not be available in all institutions.

McHenry et al⁵ have suggested that a dose of 1 mg/kg of gentamicin be given at dosage intervals determined by calculating the mean half-life

($T_{1/2}$) of gentamicin ($T_{1/2} = \text{serum creatinine [Cs]} \text{ in mg/ml} \times 4$). If the creatinine clearance is stable, the drug is then given every 1 to 3 half-lives. For example, if the serum creatinine is 3, The $T_{1/2}$ is equal to the serum creatinine $\times 4$, or 3×4 , which is 12. Twelve $\times 2$ half-lives is 24 hours. A 1 mg/kg dose would then be given every 24 hours. Chan et al⁶ have advocated the use of a dosage nomogram derived from serum creatinine and endogenous creatinine clearance. This results in a lower individual dose given at the usual 8-hourly intervals and may provide more constant serum gentamicin levels. The importance of monitoring serum creatinine or creatinine clearance during the therapy with aminoglycosides cannot be over emphasized, and the dosage must always be adjusted in the presence of renal insufficiency.

Gentamicin is useful in the treatment of infections caused by *Pseudomonas aeruginosa* and most other facultative Gram-negative bacilli. Alkalization of the urine will increase its activity in urinary tract infections. Resistance to gentamicin may be increasing in some communities attributable perhaps to overuse of this agent. Gentamicin is useful for consideration empirically with penicillins or cephalosporins in clinical situations where unknown sepsis with a high likelihood of *Pseudomonas* infection exists. However, if another Gram-negative bacillus is isolated from the patient, and this organism is found to be sensitive to other antibiotics, physicians should be encouraged to change to another effective agent. This procedure may preserve the usefulness of gentamicin for a longer period of time. The combination of gentamicin and carbenicillin is synergistic for *Pseudomonas aeruginosa* and some other Gram-negative organisms.^{7,8} Gentamicin and the other aminoglycosides cross the blood brain barrier poorly even in the presence of an inflammatory process. These drugs have been used, however, with some success in Gram-negative bacterial meningitis when given intrathecally.⁹

The side-effects of gentamicin are shared by all of the members of the aminoglycoside class. These side-effects include damage to the 8th cranial nerve. Streptomycin is known to affect predominantly the vestibular portion of the 8th nerve, whereas, kanamycin tends to produce abnormalities in the auditory portion of the nerve resulting occasionally in permanent deafness. Gentamicin may affect either the auditory or the vestibular portions of the nerve. Although the toxicity of aminoglycosides is

(Continued on next page)

generally thought to be dose related, there are reports in the literature of sudden onset of 8th nerve damage associated with a single dose of the drug. Aminoglycoside-associated nephrotoxicity may present as rising creatinine or as acute tubular necrosis. This manifestation of its toxicity is often reversible if the aminoglycoside is discontinued or dramatically reduced in dosage. For gentamicin it is advisable to be certain that the serum concentration remains less than 10-12 cg/ml.

4. Tobramycin — (Nebcin® — Lilly)

Tobramycin is a new aminoglycoside very similar in structure to gentamicin, which has been introduced very recently for clinical use. The major advantage of tobramycin is that it is effective against some strains of *Pseudomonas aeruginosa* which have become resistant to gentamicin. It should be stressed that some strains of *Serratia marcescens* and other Gram-negative rods are less sensitive to tobramycin than to gentamicin.¹⁰ Although some experimental animal studies suggest that there may be slightly less oto- and nephrotoxicity associated with the use of tobramycin, there are no clinical studies available to document this point in patients.

It is important to emphasize that none of the aminoglycoside antibiotics are useful against anaerobic Gram-negative rods such as *Bacteroides fragilis*, *Bacteroides melaninogenicus*, and *Fusobacteria* species. There are other aminoglycosides currently under study; these include amikacin (Bristol Laboratories) and sisomicin (Schering Laboratories) which are similar in their activity and toxicity to the other aminoglycosides mentioned above. Their major advantage may prove to be enhanced activity against gentamicin- or tobramycin-resistant strains of *Pseudomonas*.

OTHER NEW ANTIBIOTICS

1. Trimethoprim-Sulfamethoxazole — (Co-trimoxazole, Bactrim® — Roche; Septra® — Burroughs-Wellcome).

This recently introduced combination of antibiotics is unique not only because it is an approved drug combination, but because the two components of the combination act on two different steps in the folic acid metabolic pathway of bacteria. The end-result of this combination is that true antibacterial synergy is effected against a wide variety of organisms including *Staphylococcus aureus*, Group A Streptococci, *S. viridans*, *S. pneumoniae*, *Hemophilus influenzae*, *Neisseria gonorrhoea*, and most aerobic enteric Gram-negative rods including *Salmonella* and *Shigella* species, but excluding *Pseu-*

domonas and the anaerobic Gram-negative rods.¹¹ The synergy referred to implies considerably more activity with the two drugs in combination than is achievable with either drug alone or the expected sum of their activities.

Current formulation of co-trimoxazole is in a 1:5 ratio of trimethoprim (80 mg) to sulfamethoxazole (400 mg), and the usual dosage is two tablets every 12 hours by mouth. Although the Federal Food and Drug Administration (FDA) has approved this drug only for the short-term treatment of infections of the urinary tract, co-trimoxazole has been shown to be exceedingly useful for other infections in other countries. For example, co-trimoxazole is useful in a lowered dose (e.g., 1 or ½ tablet at hour of sleep) in the long term suppression of chronic urinary tract infections.

Similarly, since trimethoprim is one of the few antimicrobial agents which is able to penetrate the prostate in an active form, co-trimoxazole is useful in the treatment of acute and chronic bacterial prostatitis.

In several studies co-trimoxazole has been efficacious in treating gonorrhea, Salmonellosis, Shigellosis, exacerbations of chronic bronchitis, otitis media, brucellosis, malaria, and toxoplasmosis.¹¹ It should be emphasized that this drug has not yet been approved for these purposes in the United States.

The side-effects of co-trimoxazole include those associated with sulfonamides such as gastrointestinal intolerance, skin rash, agranulocytosis, glossitis, and stomatitis, all of which occur uncommonly. Since both trimethoprim and sulfonamides interfere with bacterial folate metabolism, the potential exists for the development of megaloblastic anemia, especially in patients with folate-poor diets. However, this is not usually significant clinically with short courses of co-trimoxazole. Also, the FDA has not approved this drug for use in pregnancy.

2. Clindamycin — (Cleocin® — Upjohn)

Clindamycin is a chlorinated derivative of lincomycin which is more completely absorbed from the gastrointestinal tract than its parent compound. This antibiotic is active against Gram-positive cocci (except Group D Streptococci) and is one of the most active agents against the anaerobic Gram-negative rods (e.g., *Bacteroides* species, *Fusobacteria* species) and other anaerobes (e.g., Clostridia, Peptostreptococci). Clindamycin has no activity against enteric Gram-negative bacilli (e.g., *E. coli*, *Klebsiella*, *Serratia*, *Proteus*) or against *Pseudomonas*.¹²

(Continued on page 478)

Gardner's Syndrome And Nasal Obstruction

Triad Of Soft Tissue Tumors, Osteomas, And Colonic Polyposis Has Manifestations Of Interest To The Otorhinolaryngologist

By Mary D. Lekas, M.D., F.A.C.S.

Gardner's syndrome is a triad of symptoms consisting of soft tissue tumors, bone tumors which are principally but not exclusively limited to the facial bones and skull, and intestinal polyps predisposed to malignancy. This paper emphasizes the significance of this symptom complex.

CASE REPORT

A 24 year old male was referred in August 1974 because of nasal obstruction from a deviated septum. He gave a past history of multiple soft tissue tumors of the scalp of six years duration. Similar lesions had been identified as epidermoid inclusion cysts after surgery at nine years of age. At age 13 a growth at the angle of the right mandible was noted, which slowly increased in size. As jaw pain began to develop, the patient underwent extraction of impacted mandibular bicuspid, retained deciduous cuspids, and first molars. As time went on, patient became concerned about the cosmetic appearance of his lower jaw. An evaluation at Rhode Island Hospital in 1967 revealed irregular bony growths at the angles of both jaws, a larger mass involving the angle of the right mandible, and three soft subcutaneous tumors of the scalp. Skull x-ray studies showed replacement of the normal trabecular pattern of the mandible and maxilla by dense bone, several

unerupted supernumerary teeth, and multiple osteomas of the mandible, frontal, ethmoid, and sphenoid sinuses. Bone films also revealed osteomas of the left seventh and tenth ribs, as well as of the humerus, radius, and tibia bilaterally. Sigmoidoscopy revealed two small benign adenomatous polyps, which were removed. Air-contrast barium enema revealed a small sessile polyp in the transverse colon; upper gastrointestinal and small bowel x-ray studies were negative.

In August 1967 a large portion of the right mandibular osteoma was removed, resulting in a better cosmetic appearance.

In January 1968 three more sessile polyps were removed from the sigmoid and rectum through the sigmoidoscope. One month later an emergency appendectomy was performed because of acute appendicitis. Air contrast barium enema performed three months later revealed a tiny sessile polyp in the mid-ascending colon.

In July 1968 a subtotal colon resection performed by Doctor Frank G. DeLuca revealed 20 sessile adenomatous polyps measuring from 0.5 to 1.5 cm in diameter. Intestinal continuity was reestablished between the distal 4 cm of ileum and the proximal portion of the rectum by an end-to-end ileorectostomy at a point 12 cm proximal to the dentate line. The polyps were more numerous in the ascending colon. No malignant changes were found.¹⁵

In August 1974 a septoplasty was performed because of nasal obstruction. The patient was found to have obstruction anteriorly on the left from a large vomerous spur; hammer and chisel were required to remove this obstruction. There

(Continued on next page)

MARY D. LEKAS, M.D., F.A.C.S., of Providence, Rhode Island, Surgeon, Department of Otolaryngology, Rhode Island Hospital; Consultant, U.S. Veterans Administration Hospital, Providence, Rhode Island; Clinical Instructor, Division of Bio-Medical Science, Brown University, Providence, Rhode Island.

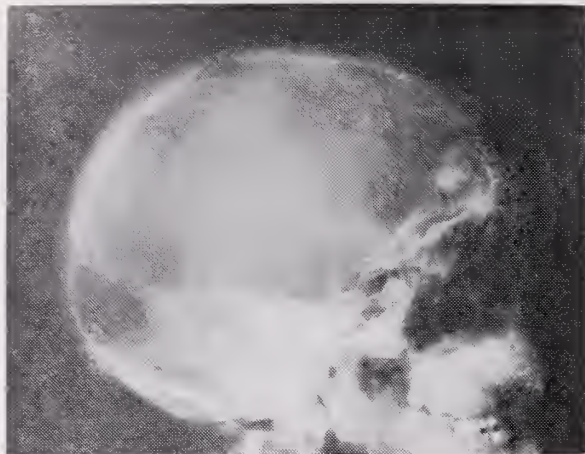


Fig. 1

Lateral view of skull, showing osteomas of sphenoid, ethmoid, and frontal bones; as well as dense bone of maxilla and mandible.

was also a posterior-superior osteoma-like thickening of the perpendicular plate of the ethmoid bone (this is usually a thin bony plate). Jansen-Middleton double-armed biting forceps was used to thin down and remove a portion of this bone. A small amount of cartilage was removed in sliver fashion, and reconstruction of the tip was performed. The patient's airway was much improved by the septoplasty procedure.

At the same admission sigmoidoscopy, polypectomy, and fulguration were performed by Doctor Robert D. Coli. A sigmoidoscopy and related studies are performed on the patient every three to six months. (Figures 1, 2, 3.).

FAMILY HISTORY

Weiner and Cooper reported the first complete pedigree of this Rhode Island family in 1955. Coli et al reported further studies on the family in 1970.¹⁵ These studies revealed six males who have inherited the disease. The family history is characteristic of Gardner's syndrome. The patient's father and three uncles died of the disease. A brother, five years younger, was found to have soft tissue tumors of the scalp, an osteoma of the frontal sinus, another of the mandible, and several unerupted supernumerary teeth in both the mandible and maxilla. The ulna bone was involved. A benign rectal polyp was removed by sigmoidoscopy. Air-contrast barium enema was negative. Repeat sigmoidoscopies revealed no polyps.

These brothers are of third generation Italo-American ancestry. No congenital defects are reported in the family, nor is there a history of consanguinity.

DISCUSSION

Eldon J. Gardner in 1950 was the first to recognize these symptoms as a predictable inherited group of traits from a single defective gene. Devic and Bussy in 1912 recorded the first instance of multiple polyposis in a woman, associated with osteomas of the mandible, sebaceous cysts of the scalp, and subcutaneous lipomas.¹⁻³

This disorder is caused by a single pleiotropic gene (i.e. affecting several parts) with a Mendelian autosomal dominant pattern of inheritance. It is not sex-linked and occurs in both sexes. The external manifestations of soft tissue and bony tumors are often present in early life, and the colonic polyps may develop later.⁴ Soft tissue tumors are epithelial tumors from the entoderm and ectoderm and can occur as epidermoid inclusion cysts (the most common), sebaceous cysts or sebacystomatosis, dermoid tumors, lipomas, neurofibromas, retroperitoneal mixed tumors, mesenteric and retroperitoneal fibromas, fibrous infiltration of the parotid gland, incisional fibromas, or desmoid tumors in operative scars. Any patient with a desmoid tumor should be suspected of having Gardner's syndrome, for desmoid tumors are more common in Gardner's syndrome than in other situations. Desmoid tumors usually occur in less than 0.05 per cent of the population. They have a band-like or tendonous appearance without a true capsule and usually rise from the connective tissue in fascia or muscle. Microscopically and grossly desmoid tumors may appear to be malignant, but they do not metastasize.^{2, 5, 6}

The bony or osseous thickening which begins in childhood or adolescence tends to become sta-

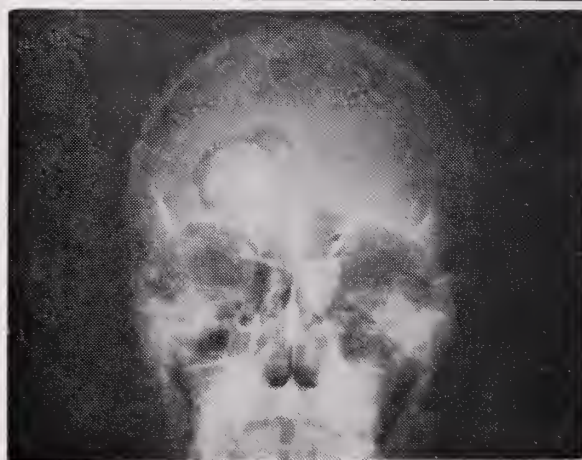


Fig. 2

Posterior-anterior view of skull, showing osteomas of facial bones and sinuses.

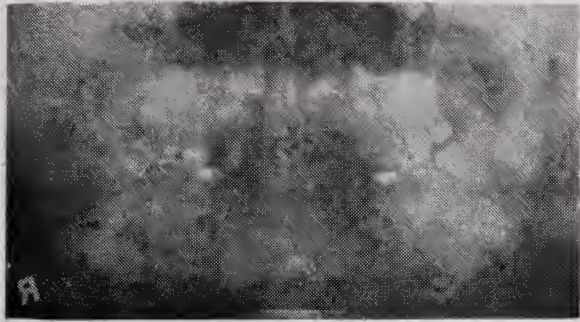


Fig. 3

Panorex view of maxilla and mandible showing a loss of normal trabecular pattern and a myriad of unerupted supernumerary teeth in the maxilla, and some in the mandible as well as osteomas, giving a chipmunklike appearance of the mandible.

tionary in adulthood. The mandible is most commonly involved, usually with increased density throughout the cancellous bone and protuberant osteomas arising from the cortical surface. This osteomatosis is usually bilateral. Other facial bones frequently involved are the maxilla and the sphenoid, ethmoid, frontal, and temporal bones. These osteomas usually project into the sinuses.⁷

Microscopic examination shows dense mature cortical bone with well-marked haversian systems. The osteomas or mesenchymal tumors of the facial bones and calvarium may be osteosclerotic or osteolytic, while in long bones a diffuse cortical thickening is more common. Malignant bone tumors in Gardner's syndrome have not been recorded, and cartilage is never involved. Calcium, phosphorus, and phosphatase levels are normal.^{6, 8}

Rudimentary and permanent teeth in the alveolar process or supernumerary unerupted teeth may occur; these are regarded as oral counterparts of the epidermal cysts.⁹ Most patients with these findings have poor teeth with frequent caries. False teeth are common at an early age. Maxilla and mandible show loss of normal bony trabecular pattern with replacement by irregular dense bone formation throughout.^{2, 10}

The polyposis of Gardner's syndrome behaves in a manner similar to that of familial polyposis of the colon. A 100 per cent incidence of malignant transformation is probable in untreated cases.¹¹ Polyposis of the colon, a familial and hereditary condition, has a higher potential for malignant degeneration than any other benign disease.¹² The polyposis precedes the colon carcinoma by a mean period of 15 years, providing the opportunity to make an early diagnosis and to institute proper treatment in the pre-cancerous stage. Any

person 25 years of age and over with symptomatic polyposis is within the cancer danger zone. Fifty per cent of symptomatic polyposis patients will have a colonic carcinoma by the age of 30 if colectomy is not performed.¹³

The colonic polyposis of Gardner's syndrome, like that of familial polyposis of the colon, is one of the most dangerous of all known precursors of colonic carcinoma;¹⁴ therefore, surgical management is advocated. The procedure of choice is fulguration of all rectal polyps followed by subtotal colectomy with ileosigmoid or ileorectal anastomosis, and sigmoidoscopic examination every three to six months for life. Anal ileostomy with preservation of the sphincteric mechanism has been recommended,¹⁵ but is no longer considered a surgically sound procedure. If carcinoma develops after subtotal colectomy, abdominoperineal resection with permanent ileostomy is advocated.¹⁷

More than 90 cases of Gardner's syndrome have been reported in the literature (including the six cases here reported.)¹³

SUMMARY

Six males of a Rhode Island family with Gardner's syndrome are reported. The classic triad of soft tissue tumors, osteomas, and colonic polyposis is described, as well as the associated dental abnormalities.

The external manifestations of the soft tissue and bony tumors tend to occur before the onset of gastrointestinal symptoms and prior to the complications of multiple polyposis, thereby affording the physician an excellent opportunity for early diagnosis of a premalignant or malignant condition.

The soft tissue and bone tumors appear in the pediatric age group. When these are noted, investigation of the entire intestine should be undertaken because of the possibility of potentially malignant polyps. Evaluation of the entire family should also be made and genetic counseling suggested.

The extraintestinal tumors in Gardner's syndrome are harmless and are usually only of cosmetic significance. The osteomas attain full size over a period of several years and then remain dormant or enlarge only slightly thereafter.

It is important that clinicians be alerted to the synchronous and metachronous occurrence of these several entities and the need for early diagnosis.

(Continued on page 480)

The Battered And Abused Children Act Of The State Of Rhode Island

Report Of Suspected Battery Or Abuse Of Any Child Is Mandated By The Law

By Hector Jaso, M.D.

Physicians in the State of Rhode Island, General Practitioners, Family physicians, and Pediatricians in particular, as well as those whose practice or assignments center in Emergency facilities, must become acquainted with the BATTERED AND ABUSED CHILDREN ACT. The Protective Services Unit of Child Welfare Services in the Department of Social and Rehabilitative Services plans to mail a copy of this law to every licensed physician in this State.

At the time of the most recent meeting of the Interdisciplinary Committee to Study Battered, Abused and Neglected Children, Chaired by Judge William Goldberg of the Family Court, I was asked to summarize the portions of the law which directly refer to the physician's responsibilities.

It is most important to realize that reporting to the Department of Social and Rehabilitative Services is mandatory under this Act by any person who has reasonable cause to believe that any child may have been battered, abused, or both.

The intent is that as a result of those reports and referrals, protective services will be made available to such children in an effort to safeguard and enhance their welfare and to provide a means to pre-

vent further abuses. In the large majority of instances, no punitive measures are initiated or instituted since it is the main objective to begin as soon as possible a therapy program with the family.

The Act defines "Physician" as *any licensed doctor of medicine, licensed osteopathic physician, and any intern or resident of any private or public hospital or other facility providing medical diagnosis, treatment or care.*

"Battered and/or abused child" means *any child who has any serious physical injury or injuries which reasonably appear to have been caused by other than accidental means and/or any child reasonably believed to be suffering from "battered child syndrome" malnutrition or sexual molestation, deprivation of necessities or cruel punishment by a parent or other person responsible for his care.*

Malnutrition in the sense of starvation seems to be the most appropriate interpretation of the term, rather than failure to thrive on certain forms of obesity which could be attributable to other forms of neglect or lack of knowledge on the part of the parents but do not belong within the battered or abused category.

REPORT BY PHYSICIANS

(1) *When any physician has cause to believe that a child under the age of eighteen (18) years brought to him or coming to him for examination, care or treatment, has had physical injury or injuries which may adversely affect his health and*

HECTOR JASO, M.D., *Consultant in Child Psychiatry, Child Development Center at Rhode Island Hospital; Assistant Clinical Professor of Psychiatry at Brown University.*

welfare inflicted upon him other than by accidental means, he shall report such incident or cause a report thereof to be made as provided in subsection (3) of this section.

(2) When a physician is attending a child under the age of eighteen (18) years as part of his regular duties as a staff member of an institution and has cause to believe that such child has physical injury or injuries which may adversely affect his health and welfare inflicted upon him other than by accidental means, he shall so notify the person in charge of the institution or his designated representative, who shall report the incident or cause such report to be made as provided in subsection (3) of this section.

(3) An immediate oral report shall be made by telephone or otherwise, simultaneously, to the Department of Social and Rehabilitative Services and the law enforcement agency (police department in any city or town and/or state police). Such report shall contain the following information if known:

- (a) The name, address and age of the child;
- (b) The name and address of the child's parents, stepparents, guardians, or other persons having custody or care of the child.
- (c) The nature and extent of the child's injury or injuries;
- (d) Any evidence of previous injuries including their nature and extent; and
- (e) Any other information which in the opinion of the physician may be helpful in establishing the cause of the child's injury or injuries.

It is important to emphasize that having "cause to believe" means suspicion alone and is sufficient to require reporting. The simultaneous reporting to the Department of Social and Rehabilitative Services and to the police should not be overlooked, since failure to notify one or the other provides the opportunity for legal challenge on a technicality.

Child protection — Any physician treating such an abused child shall have the right to keep such child in the custody of a hospital for no longer than seventy-two (72) hours, with or without the consent of his parents or guardian, pending the filing of an ex-parte petition to the Family Court. The expense for such temporary care shall be paid by the parents or guardian of such child or, if they are unable to pay, by the director.*

Immunity from liability — Any person participating in good faith in the making of a report pursuant to this chapter shall have immunity from any liability, civil or criminal, that might otherwise be incurred or imposed. Any such participant shall have the same immunity with respect to participation in any judicial proceeding resulting from such report.

Testimony — Privilege — For the purpose of this chapter, any physician-patient privilege, husband-wife privilege, or any privilege, except the attorney-client privilege, provided for by professions . . . which might exist, both as they might relate to the competency of the witness and to the exclusion of confidential communications shall not pertain to testimony given in a hearing on a petition for removal.

Physicians or others who want to have a copy of The Battered and Abused Children Act should request it by writing or calling Protective Services, Child Welfare Services, 333 Grotto Avenue, Providence, Rhode Island 02906 (401-277-2791).

REFERENCES

- ¹Bullard DM, Jr., et al.: Failure to thrive in the "neglected" child. *Am J Orthopsychiatry* 37:680-90, Jul 67
- ²Elmer E, Gregg GS: Developmental characteristics of abused children. *Pediatrics* 40:596-602, Oct 67 (Pt.1)

*Director of Social and Rehabilitative Services.



ONE SENTENCE ESSAY

There is no computer that can read a physician's mind. (very few can even read his handwriting).

. . . SAMUEL RAYMOND,

"Physician-Oriented Data Processing," *JAMA* 234: 83, 1975.

CAT, ACTA, and CT

CAT stands for Computerized Axial Tomography and ACTA for Automatic Computerized Transverse Axial-Scanner. Tomography, which has been a conventional radiographic technique for many years, produces images in greater detail of structures lying in a predetermined plane of tissue while blurring or eliminating detail of structures in other planes. There is some indication that eventually both of these terms will be replaced by the simpler Computerized Tomography or CT.

Conventional x-rays show only major contrasts between body tissue densities such as solids, liquids, and air. Fine density differences, such as between structures within the brain or liver, do not usually register on an x-ray plate. The x-ray picture is a total of all structures between the x-ray source and the film, with no indication of relative depth inside the body. Only by taking multiple x-rays from different positions is it possible to indicate to some extent the relative location of different structures. X-ray studies are enhanced by the use of radio-opaque substances and air.

In recent years radioactive scanning and the use of ultra-sound have increased the range of non-invasive study. Ultrasound waves are blocked by bone and gas, which significantly limits their usefulness in the brain, lungs, and extremities.

The basic CAT scanning unit, designed for tomography of the head, includes a scanning unit (the x-ray tube and accurately aligned radiation detectors), a computer with magnetic disc unit and printer, and a cathode ray viewer. The patient's head is scanned horizontally by a tightly collimated,

narrow beam of x-rays. The thickness of the tissue slice to be examined can be selected. The x-ray tube and detectors are mounted opposite each other on a common frame, allowing the detectors to receive and record the intensity of the x-ray beam after it has passed through the head. In the British EMI scanner the frame which holds the tube and detectors moves back and forth across the head taking 240 readings of the x-ray intensity. The frame then moves one degree and repeats the process. This sequence is repeated for 180°, during which procedure 43,200 readings of intensity are taken. The computer calculates 25,600 absorption values for each slice and plots them so as to build a picture on a 160 x 160 point matrix (a rectangular arrangement of picture points indicating the absorption value of the tissue at each site). The data are also displayed in analog form as a cathode ray tube reproduction, where the brightness of each point is proportionate to the absorption. Thus bone is white, brain tissue various shades of gray, and spinal fluid black.

CAT, originally limited to the brain, has now been developed for use on other parts of the body. The first whole body scanner went into clinical use in February, 1974 at the Georgetown University Medical Center in Washington, D.C. This more advanced instrument, designated the ACTA Scanner (Automatic Computerized Transverse Axial-Scanner), was invented and developed by Doctor Robert S. Ledley, Professor of Physiology, Biophysics, and Radiology at Georgetown University.

The ACTA-Scanner image is made over a 4½-

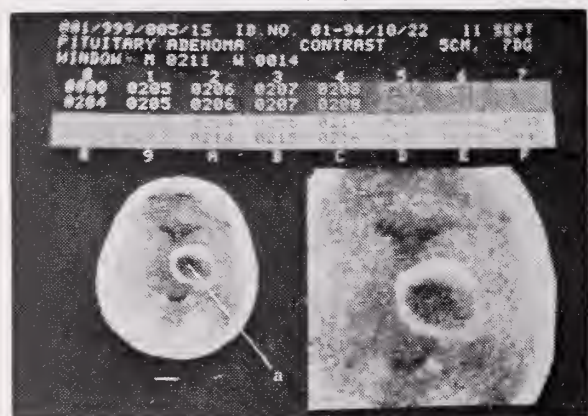


Fig. 1: ACTA scan showing a tumor of the pituitary, a gland at the base of the brain. The image on the left is a standard scan. On the right is an enlargement of the area around the tumor. a. Pituitary Tumor. The panel above the scan shows tissue densities covered by each color or shade. (Courtesy Pfizer Pharmaceuticals.)

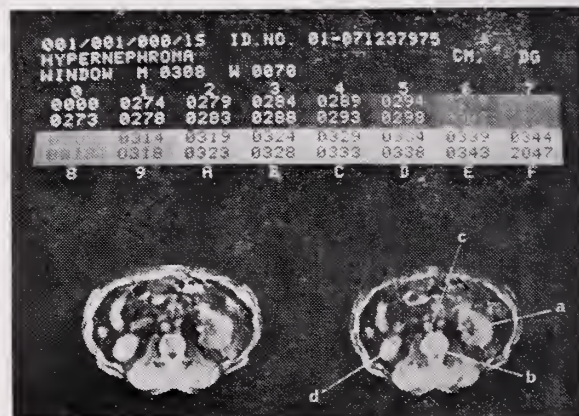


Fig. 2: ACTA scan showing two adjacent sections in the abdomen of a patient with hypernephroma, a tumor of the kidney. Structures shown include: a. Kidney Tumor, b. Spine, c. Aorta, d. Normal Kidney. The panel above the scan shows tissue densities covered by each color or shade. (Courtesy Pfizer Pharmaceuticals.)

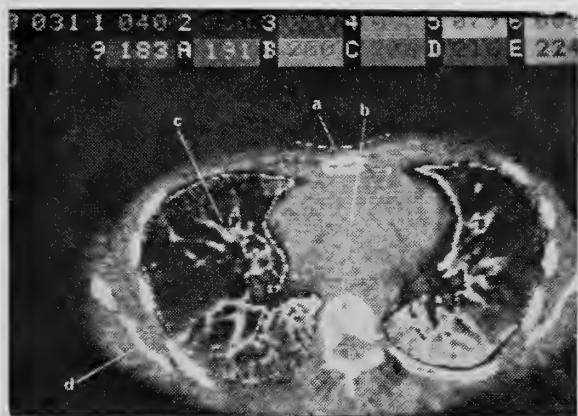


Fig. 3: ACTA scan of a normal chest using the new 320 matrix just developed for the ACTA-Scanner. Structures shown include: a. Sternum, b. Spine, c. Lung, d. Scapula. The panel above the scan shows tissue densities covered by each color or shade. (Courtesy Pfizer Pharmaceuticals.)

5½ minute period, making up to 320 measurements in a single scan-pass across the body cross-section under examination. It likewise rotates one degree for each scan-pass, up to a 180° half circle. Thus every point is "measured" 180 times. In this case there are up to 64,000 intersection points.

The computer has the capacity to distinguish between 2048 different densities, ranging from transparent (0) to extremely dense (2047). Thus on a black and white chest scan, if the computer focuses on the density of heart muscle, tissues of much lower density, such as the lungs, will show up as black, and tissues of much lighter density, such as bone, will show up as white (Figs. 1-3). Once a scan is made, all the densities are stored in the computer, and the operator can later focus on any desired tissue, such as the lung or bone.

The image computed by the ACTA-Scanner is projected on a set of TV screens in tones of gray or in operator-selected colors. It can pick out distinctive tissue areas as small as a few millimeters

across and register density differences many times smaller than those detectable on a conventional x-ray plate. The image is available immediately on completion of the scanning process, and is stored on magnetic tape for recall, re-analysis, or comparison with new scans at any time. Image display equipment includes both color and black and white TV screens. Computer generated color has been found useful in producing sharp contrasts between tissues of similar densities. A section of the body may be viewed in two ways. In one method a series of parallel scans taken close to each other show the desired segment in layers from top to bottom. It is then possible by computer manipulation to take the data from such a series of scans and translate them into a vertical picture representing a slice through the series of pictures. A series of scans can thus be made from the base of the head down the neck to the shoulders. The computer reconstructs a top-to-bottom slice through the middle of the neck as viewed from the front or side.

The use of computerized axial tomography could have a profound impact on existing diagnostic techniques and their related hospitalization costs. Despite its high initial cost, it could accomplish this by reducing the incidence of diagnostic procedures that require hospitalization.

The ACTA-Scanner is currently available for under \$350,000, but some newer models may cost in excess of \$500,000. Since the devices easily exceed the \$100,000 level above which hospitals must have approval from local health planning agencies before purchase is allowable, many institutions will be frustrated in their plans to procure such equipment. It is not likely that authorization could be justified for hospitals of less than 200 beds. No such equipment is yet available in Rhode Island, but at least one hospital has expressed an interest in entering the field.

Editor's Mailbox

DETOXIFICATION FACILITIES

To the Editor:

I wish to point out one error in your excellent issue of September, 1975 on alcoholism, in your editorial "Alcoholism in Rhode Island" on page 398, in which you stated, "There are no private facilities for detoxification in the whole of Rhode Island." The fact is that there is a specialized in-patient alcoholism detoxification service at Newport Hospital which serves private patients as well as those of its Mental Health Center.

ABRAHAM HELLER, M.D.

Director, Mental Health Center
Newport Hospital
Newport, R. I.

We are pleased to be able to provide this information to our readers. The editorial quoted, however, had reference to unaffiliated rather than hospital based facilities of this type.

ED.

MYOCARDIAL REVASCULARIZATION FOR PATIENTS WITH UNSTABLE ANGINA PECTORIS

(Continued from page 467)

- gency myocardial revascularization. *Am J Cardiol* 32:901-8, Dec 73
- ¹⁹Bolooki H, Sommer L, Kaiser GA, et al.: Long-term follow-up in patients receiving emergency revascularization for intermediate coronary syndrome. *J Thorac Cardiovasc Surg* 68:90-100, Jul 74
- ²⁰Weinbraub RM, Voukydis PC, Aroesty JM, et al.: Treatment of preinfarction angina with intraaortic balloon counter pulsation and surgery. *Am J Cardiol* 34:809-14, Dec 74
- ²¹Hill JD, Kerth WJ, DeLeval MR, et al.: Myocardial infarction and preinfarction: results of emergency myocardial revascularization. *J Cardiovasc Surg* 15:205-8, Mar/Apr 74
- ²²Wisoff BG, Aintablian A, Hartstein ML, et al.: Unified diagnostic and surgical approach for unstable angina. *Ann Thorac Surg* 18:472-8, Nov 74
- ²³Bonchek LI, Rahimtoola SH, Anderson RP, et al.: Late results following emergency saphenous vein bypass grafting for unstable angina. *Circulation* 50:972-7, Nov 74
- ²⁴Bentivoglio LG, Ablaza SG, Greenberg LF: Bypass surgery for Prinzmetal angina. *Arch Intern Med* 134:313-6, Aug 74
- ²⁵Silverman ME, Flamm MD Jr: Variant angina pectoris. *Ann Intern Med* 75:339-43, Sep 71



AN ANTIBIOTIC UPDATE: II. NEW AMINOGLYCOSIDES AND OTHER ANTIBIOTICS

(Continued from page 470)

The drug is available in an oral preparation (clindamycin hydrochloride hydrate) with a usual dose of 150 to 450 mg every 6 hours and as an intravenous or intramuscular preparation (clindamycin phosphate) with a usual dose of 300 to 600 mg every 6 or 8 hours depending on the clinical severity of the infection. The present indications are limited to serious infections due to susceptible anaerobic bacteria and also to streptococcal and staphylococcal infections where other drugs could not be tolerated.

The side-effects of clindamycin therapy include occasional neutropenia and rash. The major concern with the use of this drug has been the increased awareness of a possible relationship of clindamycin with pseudomembranous colitis (PMC). Although many patients treated with clindamycin may develop diarrhea, the actual incidence of PMC is not clearly defined. There may be regional variations in the frequency of clindamycin-associated colitis; one series reported this condition in 10 per cent of clindamycin-treated patients.¹³ Patients who develop diarrhea during clindamycin

therapy should discontinue the drug and be sigmoidoscoped immediately.

3. Spectinomycin — (Trobicin® — Upjohn)

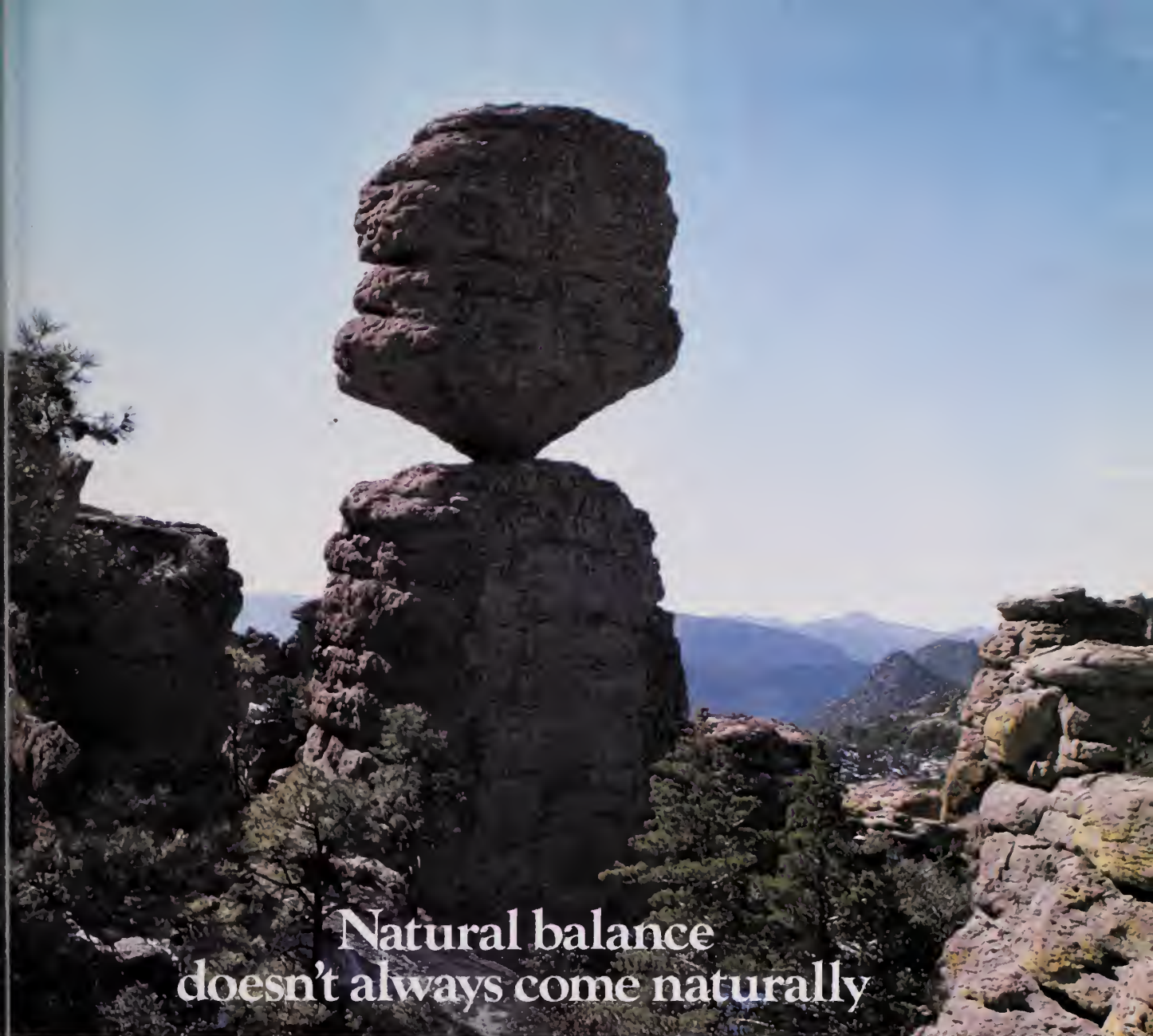
This is an aminocyclitol antibiotic closely related to the aminoglycosides discussed above. In the United States it is approved only for the treatment of uncomplicated gonococcal urethritis.¹⁴ Most strains of *Neisseria gonorrhea* are inhibited by 7.5 to 20 ug/ml, and peak serum levels after a 2 gram dose approach 100 ug/ml. The dose recommendation recently revised by a National Center for Disease Control committee is for 2 grams intramuscularly for both males and females. As with all treatment for gonorrhea, follow-up cultures are advisable at three weeks. The side effects are minimal and are limited to pain at the injection site and transient skin rash and rise in serum creatine phosphokinase.

The control of the use of the new antimicrobial agents and the possible prevention of emergence of resistant bacteria rest with the physician. The use of new potent antibiotics should be limited to clear-cut indications for documented or highly suspected bacterial infections. There is no role for antibiotics in common upper respiratory viral infections. Antibiotics in general do not prevent infection (except in a few well defined clinical situations), and antibiotics are not without serious and rarely life-threatening complications. Therefore, the prescription of these agents requires a thorough clinical and bacteriological evaluation of the potential recipient. If antibiotics are used wisely, their usefulness to the physician and his patients will certainly be prolonged.

REFERENCES

- ¹Finland M: Changing ecology of bacterial infections as related to antibacterial therapy. *J Infect Dis* 122:419-31, Nov 70
- ²Steigbigel RT, Greenman RL, Remington JS: Antibiotic combinations in the treatment of experimental *Staphylococcus aureus* infection. *J Infect Dis* 131:245-51, Mar 75
- ³Kucers A: *The Use of Antibiotics: A Comprehensive Review With Clinical Emphasis*. J.B. Lippincott Company 1972, pp. 126-38
- ⁴Klein JO, Eickhoff TC, Finland M: Gentamicin: activity in vitro and observations in twenty-six patients. *Amer J Med Sci* 248:528-44, Nov 64
- ⁵McHenry MC, Gavan TL, Gifford RW, Jr, et al: Gentamicin dosages for renal insufficiency: Adjustments based on endogenous creatinine clearance and serum creatinine concentration. *Ann Intern Med* 74:192-7, Feb 71
- ⁶Chan RA, Benner EJ, Hoepfich PD: Gentamicin therapy in renal failure: a nomogram for dosage. *Ann Intern Med* 76:773-8, May 72
- ⁷Andriole VT: Synergy of carbenicillin and gentamicin in experimental infection with *Pseudomonas*.

(Continued on page 480)



Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

ound useful in the management of vertigo* associated with
ases affecting the vestibular system.
an relieve nausea and vomiting often associated with vertigo.*
usual adult dosage for Antivert/25 for vertigo*: one tablet t.i.d.
lso available as Antivert (meclizine HCl) 12.5 mg. scored
ets, for dosage convenience and flexibility.
ntivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for
sea, vomiting and dizziness associated with motion sickness.

SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of
ences—National Research Council and/or other information, FDA has classified
indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with
tion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the
ibular system.

inal classification of the less than effective indications requires further
estigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during preg-
nancy or to women who may become pregnant is contraindicated in view of the
teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation
has produced cleft palate in the offspring. Limited studies using doses of over 100 mg/
kg/day in rabbits and 10 mg/kg/day in pigs and monkeys did not show cleft palate.
Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hyper-
sensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients
should be warned of this possibility and cautioned against driving a car or operating
dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children
have not been done; therefore, usage is not recommended in the pediatric age group.


Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred
vision have been reported.

More detailed professional information available on
request.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

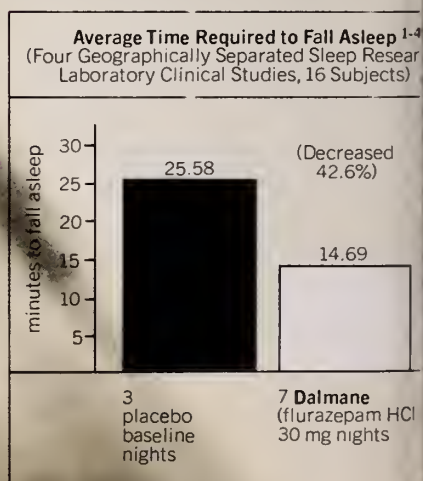
Antivert[®]/25 (meclizine HCl) 25 mg. Tablets for vertigo*



How do you handle trouble falling asleep?

With Dalmane® (flurazepam HCl), results are highly predictable.

As demonstrated below, Dalmane induces sleep within 17 minutes, average:¹⁻⁴



**And for those with trouble
aying asleep or sleeping
g enough...**

...sleep research laboratory
nical studies prove: Dalmane
reases number of nighttime
akenings and increases total
ep time.⁵

**Dalmane (flurazepam HCl)
relatively safe, seldom
uses morning "hang-over"**

Dalmane is generally well
erated. The usual adult dose of
mg should initially be lowered to
ng for the elderly and
ilitated, to help preclude
ersedation, dizziness or ataxia.
praisal of possible risks is
ggested before prescribing.

REFERENCES:

aracan I, Williams RL, Smith JR:
sleep laboratory in the investigation
leep and sleep disturbances. Scientific
ibit at the 124th annual meeting of the
merican Psychiatric Association,
hington DC, May 3-7, 1971

rost JD Jr: A system for automati-
y analyzing sleep. Scientific exhibit at
24th annual Clinical Convention of the
merican Medical Association, Boston,
29-Dec 2, 1970; and at the 42nd
ual scientific meeting of the Aerospace
ical Association, Houston, Apr 26-29,

ogel GW: Data on file, Medical Depart-
nt, Hoffmann-La Roche Inc., Nutley NJ
ement WC: Data on file, Medical
artment, Hoffmann-La Roche Inc.,
ley NJ

ata on file, Medical Department,
mann-La Roche Inc., Nutley NJ

**ore prescribing Dalmane (flurazepam
HCl), please consult complete product
rmation, a summary of which follows:**

ications: Effective in all types of insomnia
acterized by difficulty in falling asleep,
uent nocturnal awakenings and/or early
ning awakening; in patients with recurring
mania or poor sleeping habits; and in
e or chronic medical situations requiring
ful sleep. Since insomnia is often transient
intermittent, prolonged administration is
erally unnecessary or recommended.

Contraindications: Known hypersensitivity
to flurazepam HCl.

Warnings: Caution patients about possible
combined effects with alcohol and other
CNS depressants. Caution against hazardous
occupations requiring complete mental alert-
ness (e.g., operating machinery, driving).
Use in women who are or may become preg-
nant only when potential benefits have been
weighed against possible hazards. Not
recommended for use in persons under 15
years of age. Though physical and psycho-
logical dependence have not been reported
on recommended doses, use caution in
administering to addiction-prone individuals
or those who might increase dosage.

Precautions: In elderly and debilitated, initial
dosage should be limited to 15 mg to preclude
oversedation, dizziness and/or ataxia. If
combined with other drugs having hypnotic
or CNS-depressant effects, consider potential
additive effects. Employ usual precautions
in patients who are severely depressed, or
with latent depression or suicidal tendencies.
Periodic blood counts and liver and kidney
function tests are advised during repeated
therapy. Observe usual precautions in
presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness,
lightheadedness, staggering, ataxia and
falling have occurred, particularly in elderly

or debilitated patients. Severe sedation,
lethargy, disorientation and coma, probably
indicative of drug intolerance or overdosage,
have been reported. Also reported were
headache, heartburn, upset stomach, nausea,
vomiting, diarrhea, constipation, GI pain,
nervousness, talkativeness, apprehension,
irritability, weakness, palpitations, chest
pains, body and joint pains and GU
complaints. There have also been rare
occurrences of leukopenia, granulocyto-
penia, sweating, flushes, difficulty in
focusing, blurred vision, burning eyes,
faintness, hypotension, shortness of breath,
pruritus, skin rash, dry mouth, bitter taste,
excessive salivation, anorexia, euphoria,
depression, slurred speech, confusion,
restlessness, hallucinations, and elevated
SGOT, SGPT, total and direct bilirubins
and alkaline phosphatase. Paradoxical
reactions, e.g., excitement, stimulation and
hyperactivity, have also been reported in
rare instances.

Dosage: Individualize for maximum beneficial
effect. *Adults:* 30 mg usual dosage; 15 mg
may suffice in some patients. *Elderly or
debilitated patients:* 15 mg initially until
response is determined.

Supplied: Capsules containing 15 mg or
30 mg flurazepam HCl.

You can
depend on the
efficacy of

Dalmane[®]
(flurazepam HCl)

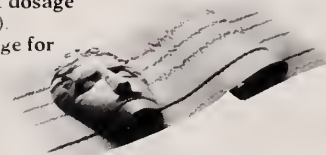
One 30-mg capsule *h.s.*— usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule *h.s.*— initial dosage for
elderly or debilitated patients.

for insomnia

Objectively proved in the sleep research laboratory:

- sleep within 17 minutes, on average
- sleep with fewer nighttime awakenings
- sleep for 7 to 8 hours, on average,
with a single *h.s.* dose

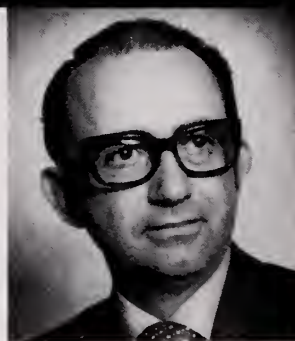


Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking, and some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

Opinion
&
Dialogue

ain purpose of drug information
r the patient is to get his coopera-
n in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass infor-
mation from physicians, medical
societies, the pharmaceutical indus-
try and centers of medical learning.
The ultimate responsibility for uni-
form labeling must, however, rest
with the Food and Drug Administra-
tion. There is nothing wrong with
the agency saying, "this informa-
tion is generally agreed upon and
therefore it should be used," as long
as our process for getting the infor-
mation is sound.

Distribution of the information
is a problem. In great measure it
would depend on the medication in
question. For example, in the case
of an injectable long-acting proges-
tone, we would think it mandatory
to issue two separate leaflets—a
short one for the patient to read be-
fore getting the first shot and a long
one to take home in order to make a
decision about continuing therapy.
In this case, the information might
be put directly on the package and
be removable at all. But for a medi-
cation like an antihistamine this
information might be issued sepa-
rately, thus giving the physician the
option of distribution. This could
reserve the placebo use, etc.

It is in the distribution of pa-
tient information that the pharma-
cist may get involved. As profession-
als and members of the health-care
team and as a most important source
of drug information to patients,
pharmacists should be responsible
for keeping medical and drug rec-
ords on patients. It is also logical
that they should distribute drug in-
formation to them.

Realistic problems must be considered

We have to expect that the in-
troduction of an information device
will also create new problems. First,
how can we communicate complex
and sophisticated information to
people of widely divergent socio-
economic and ethnic groups? Sec-
ond, what will we say? And third,
how can we counteract the negative
attitude of many physicians toward
any outside influence or input? Hope-
fully the medical profession will re-
spond by anticipating the problems
and helping to solve them. Assum-
ing we can also solve the difficulty
of communicating information to di-
verse groups throughout the United
States, our remaining task will be
the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chem-
ical and such types of material
should not be included. And there is

no point in the routine listing of side
effects like nausea and vomiting
which seem to apply to practically
all drugs, unless it is common with
the drug. However, serious side ef-
fects should be listed, as should in-
formation about a medication that
is potentially risky for other reasons.

Other pertinent information
might consist of drug interactions,
the need for laboratory follow-up,
and special storage requirements.
What we want to include is informa-
tion that will help increase patient
compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the
patient would accomplish a number
of good things: the patient could be
on the lookout for possible serious
side effects; his compliance would
increase through greater under-
standing; the physician would be a
better source of information since
he would be freer to use his time
more effectively; other members of
the health-care team would benefit
through patient understanding and
cooperation; and, finally, the physi-
cian-patient relationship would prob-
ably be enhanced by the greater
understanding on the part of the pa-
tient of what the physician is doing
for him.

ly the doctor can remove that fear
20 or 30 minutes of conversation.

I'm not suggesting that we
withhold any information from the
patient because, first of all, it would
be totally dishonest and secondly, it
would defeat the very purpose of the
insert. I do think that a patient on the
birth control pill should know about
the incidence of phlebothrombosis.

If you're going to tell a patient
the incidence of serious adverse re-
actions, then you have to tell him
about a concerned medical decision
is made to use a particular medi-
cation in his situation after careful
consideration of the incidence of
complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, be-
cause of severe emotional problems,
could not handle the information
contained in a patient package in-
sert. Yet if we are going to have a
package insert at all, we just can't
have two inserts. I think we might
simply have to tell the families of
these patients to remove the insert
from the package.

Legal implications of the patient package insert

Just what effect would a pa-

tient package insert have on mal-
practice? We could try to avoid any
legal implications by pointing out
that the physician has selected a
particular medication because, in
his professional judgment, it is the
treatment of choice. For instance,
you can't tell everyone taking anti-
histamines not to work just because
a few patients develop extreme
drowsiness which can lead to acci-
dents. And what about the very small
incidence of aplastic anemia rarely
associated with chloramphenicol?
If, based on sensitivity studies and
other criteria, we decide to employ
this particular antibiotic, we do so
in full knowledge of this serious po-
tential side effect. It's not a simple
problem.

How do we handle an insert for medi- cation used for a placebo effect?

With rare exceptions, physi-
cians no longer use medications for
a placebo effect. This question does
raise the issue of how a patient may
react to receiving a medication
without a package insert.

Preparation of the package insert

The development of the insert
ought to be a joint operation be-
tween physicians, the pharmaceu-
tical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a co-
ordinator or catalyst. It is the only
organization through which the pro-
fession as a whole, irrespective of
specialty, can speak. It has relatively
instant access to all the medical ex-
pertise in this country. And it can
bring that professional expertise to-
gether to ensure a better package
insert. The A.M.A. can work in con-
junction with the industry that has
produced the product and which is
ultimately going to supply the insert.

I don't think we should rely, or
expect to rely, on legislative com-
mittees and their nonprofessional
staffs to make these decisions when
it is perfectly within the power of
the two groups to resolve the issues
in the very best American tradition—
without the government forcing us
to do it. I think the F.D.A. has to be
involved, but I'd like them to become
involved because they were asked
to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



AN ANTIBIOTIC UPDATE: II. NEW AMINOGLYCOSIDES AND OTHER ANTIBIOTICS

(Continued from page 478)

- ⁷J Infect Dis 124:Suppl 124:46-55, Dec 71
- ⁸Kluge RM, Standiford HC, Tatem B, et al.: The carbenicillin-gentamicin combination against *Pseudomonas aeruginosa*. *Ann Intern Med* 81:584-7, Nov 74
- ⁹Rafal JJ Jr: Treatment of gram-negative bacillary meningitis in adults. *Ann Intern Med* 77:295-302, Aug 72 (131 ref.)
- ¹⁰Geddes AM, Goodall JA, Speirs CF, et al.: Clinical and laboratory studies with tobramycin. *Chemotherapy* 20:245-56, 1974
- ¹¹Trimethoprim-sulphamethoxazole. *Drugs* 1:8-53, 71 (110 ref.)
- ¹²Meyers BR, Kaplan K, Weinstein L: Microbiological and pharmacological behavior of 7-chlorolincomycin. *Appl Microbiol* 17:653-7, May 69
- ¹³Tedesco FJ, Barton RW, Alpers DH: Clindamycin-associated colitis, A prospective study. *Ann Intern Med* 81:429-33, Oct 74
- ¹⁴Schroeter AL, Reynolds BH, Holmes KK, et al.: Spectinomycin in the treatment of gonorrhea. *J Amer Dis Assoc* 1:139-45, Jun 75



OFFICE SPACE FOR RENT

THE 111 PLAIN ST. MEDICAL BUILDING
is a newly renovated construction within
eye-view and two minutes' walk of the
RHODE ISLAND HOSPITAL
and less than six minutes' drive from
BROWN U. MEDICAL SCHOOL
ROGER WILLIAMS HOSPITAL
MIRIAM HOSPITAL
VETERANS HOSPITAL
and a little longer from the
LADY OF FATIMA — ST. JOSEPH'S COMPLEX

Offices include carpeting, electric heating, air-conditioning, electronic protection, elevator, janitorial services, laboratory and x ray services.

**FOR APPOINTMENT
CALL 331-6317 ANYTIME**

GARDNER'S SYNDROME AND NASAL OBSTRUCTION

(Continued from page 473)

REFERENCES

- ¹Gardner EJ, Richards RC: Multiple cutaneous and subcutaneous lesions occurring simultaneously with hereditary polyposis and osteomatosis. *Am J Hum Genet* 5:139-47, Jun 53
- ²Jones EL, Cornell WP: Gardner's syndrome: Review of the literature and report on a family. *Arch Surg* 92:287-300, Feb 66
- ³Colcock BP, Zomorodian AA: Gardner's syndrome. Multiple polyposis of colon, bone tumors, and soft-tissue tumors. *Postgrad Med* 40:929-34, Jul 66
- ⁴Duncan BR, Dohner VA, et al.: The Gardner syndrome: Need for early diagnosis. *J Pediatr* 72:497-505, Apr 68
- ⁵Martel AJ, Bonanno CA: Multiple polyposis of the gastrointestinal tract with osteoma and soft tissue tumors. *Amer J Dig Dis* 13:588-91, Jun 68
- ⁶Cramer LM: Gardner's syndrome. *Plast Reconstr Surg* 29:402-7, Apr 62
- ⁷Fitzgerald GM: Multiple composite odontomas coincidental with other tumorous conditions; report of a case. *J Amer Dent A* 30:1408-17, 1 Sep 43
- ⁸Gorlin RJ, Chaudhry AP, et al.: Oral manifestations of the Fitzgerald-Gardner, Pringle-Bourneville, Robin, adrenogenital, and Hurler-Pfaundler syndromes. *Oral Surg* 13:1233-44, Oct 60
- ⁹Liedberg G, Lindholm K, et al.: Gardner's syndrome: Report of a family. *Acta Chir Scand* 136: 81-4, 1970
- ¹⁰Fader M, Kline SN, et al.: Gardner's syndrome (intestinal polyposis, osteomas, sebaceous cysts) and a new dental discovery. *Oral Surg* 15:153-72, Feb 62
- ¹¹Dunning EJ, Ibrahim KS: Gardner's syndrome: Report of a case. *Ann Surg* 161:565-8, Apr 65
- ¹²Yonemoto RH, Slayback JB, et al.: Familial polyposis of the entire gastrointestinal tract. *Arch Surg* 99:427-34, Oct 69
- ¹³Thomford NR, Greenberger NJ: Lymphoid polyps of the ileum associated with Gardner's syndrome. *Arch Surg* 96:289-91, Feb 68
- ¹⁴Stritzler C: Gardner's syndrome. *Arch Dermatol* 87:778, Jun 63
- ¹⁵Coli RD, Moore JP, et al.: Gardner's syndrome: A revisit to a previously described family. *Amer J Dig Dis* 15:551-68, Jun 70
- ¹⁶Weiner RS, Cooper P: Multiple polyposis of the colon, osteomatosis, and soft-tissue tumors: Report of a familial syndrome. *N Engl J Med* 253:795-9, 10 Nov 55
- ¹⁷Magalini SI: *Dictionary of Medical Syndromes*. Philadelphia, J. B. Lippincott Company, 1971. P.210, Gardner's



One Sentence Essay

We have faults we have hardly used yet.

... Pogo

Reports Of The House Of Delegates

Report Of The Meeting Of January 29, 1975

A regular meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Providence, on Wednesday, January 29, 1975. The meeting was called to order by the Speaker of the House, Doctor Herbert F. Hager, at 2:05 p.m.

Delegates in attendance were: Doctors David Newhall, Robert E. Baute, Joseph E. Wittig, Charles P. Shoemaker, George Lewis, Robert Fortin, David R. Hallmann, Paul J. M. Healey, Richard Kuhn, Nathan Sonkin, Jaroslaw Koropej, Richard Kraemer, James McGrath, Louis Morrone, Erwin Siegmund, Francis Scarpaci, Leonard S. Staudinger, Nathan Chaset, Stephen J. Hoyer, John P. Grady, Frank W. Sullivan, Edmund T. Hackman, Orlando M. Armada, D. Richard Baronian, Alphonse R. Cardi, George E. Charon, George N. Cooper, John A. Dillon, Joseph D. DiMase, Donald P. Fitzpatrick, Melvyn Gelch, Constantine S. Georas, Herbert F. Hager, Milton W. Hamolsky, Thomas F. Head, Charles L. Hill, Melvin D. Hoffman, Robert Indeglia, Henry M. Litchman, William J. MacDonald, Peter L. Mathieu, Jr., Joseph B. May, H. Raymond McKendall, Raul Nodarse, P. Joseph Pesare, Ralph F. Pike, James A. Reeves, Richard P. Sexton, Richard L. Testa, Elihu S. Wing, Jr., Seebert J. Goldowsky, John J. Cunningham, Arnold Porter, and Charles B. Round.

Delegates absent were: Doctors Carl V. Anderson, Robert Brogan, Richard W. Perry, Richard Zuerner, J. Gerald Lamoureux, Joseph E. Caruolo, George V. Coleman (out of town), Herbert Constantine, Domenic L. Coppolino, Frank B. DeLuca (out of town), Arthur I. Geltzer, Abraham Horvitz, Vincent I. MacAndrew, William R. Thompson (on vacation), Wilson F. Utter, and Joseph E. Cannon (due to illness).

Commissioners in attendance were: Doctors Leonard S. Staudinger, Thomas F. Head, Kenneth Liffmann, Richard P. Sexton, and Melvin D. Hoffman.

Specialty Society Representatives in attendance were: Doctors Kenneth Nanian, Henry M. Litchman, David Hallman, Patrick A. Broderick, Louis V. Sorrentino, Guy A. Settipane, Charles L. Hill, and Walter Cotter.

Specialty Society Representatives absent were: Doctors Marshall Taylor, Wilson F. Utter, Charles E. Millard, William F. Varr, Richard Peters, Bancel L. Schiff, Arthur I. Geltzer, Joseph E. Caruolo, and David M. Barry.

Also present were: Tim Norbeck, Executive Director and Lance D. Taylor, Assistant Executive Director.

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the September 18 meeting of the House had been printed and distributed by the Secretary.

Action: A motion was made, seconded, and voted that the minutes of the September 18, 1974, meeting of the House of Delegates be approved as presented.

REPORT OF THE SECRETARY

The Speaker noted that the report of the Secretary was included in the handbook.

Action: A motion was made, seconded, and voted that the report of the Secretary be approved and placed on record.

REPORT OF THE TREASURER

Doctor Frank W. Sullivan noted that his report was included in the handbook for the meeting and discussed several portions of it.

Action: A motion was made, seconded, and voted that the report of the Treasurer be received and placed on file.

Doctor Chaset reported to the House of our legal counsel's efforts to keep legal expenses as low as possible.

(Continued on next page)

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
HOpkins 7-8050

Action: A motion was made, seconded, and voted to express the deep appreciation of the Rhode Island Medical Society to Mr. Charles Clapp for his outstanding and dedicated service to the Society.

RECOMMENDATIONS FROM THE COUNCIL

Doctor Round read the recommendations from the Council as published in the handbook for the meeting. Action was taken on the following items:

1. *Spring Meeting of the House*

A motion was made, seconded, and voted that the recommendations be adopted.

2. *Blue Shield Directors*

A motion was made, seconded, and voted that Doctors John J. Cunningham, Edmund T. Hackman, Melvin D. Hoffman, and Kenneth Liffmann be nominated for three-year terms each as members of the Board of Directors of Blue Shield.

Action: A motion was made, seconded, and voted to direct a commendation to Doctors Arnold Porter and Stanley D. Simon for their distinguished service on behalf of the Rhode Island Medical Society.

3. *Herbert F. Hager, M.D.*

A motion was made, seconded, and voted to reaffirm the nomination of Doctor Herbert F. Hager to serve the remainder of the unexpired term of Doctor Earl J. Mara until March, 1976.

4. *Legislative Counsel*

A motion was made, seconded, and voted to approve of Attorney Charles Butterfield, Jr., as the Society's legislative Counsel during the 1975 Session of the Rhode Island General Assembly.

5. *Bank Cards*

A motion was made, seconded, and voted that the use of a credit card by a patient on an individual basis is permissible, subject to the restrictions and guidelines as listed by the AMA Judicial Council.

6. *Concurrent Review*

Action: A motion was made, seconded, and voted unanimously that Rhode Island PSRO is the only reasonable or acceptable group to direct and guide hospital utilization committees in the role of performing reasonable and practical concurrent peer review.

It was also the wish of the delegates to encourage the chairmen of the utilization review committees in each Rhode Island hospital to send a similar letter to the Rhode Island Medical Society affirming these principles.

ELECTION OF THREE PHYSICIANS TO THE PROFESSIONAL ADVISORY COMMITTEE OF BLUE SHIELD

The Speaker noted that the House was authorized under the bylaws of Blue Shield to elect three physicians to serve for one year on the Professional Advisory Committee of that organization. He noted that the physicians whose terms are expiring are Doctors J. Robert Bowen, Joseph DiMase, and John P. Grady. In the House action, Doctors J. Robert Bowen, Joseph DiMase, and John P. Grady were elected to serve on the Professional Advisory Committee of Blue Shield for 1975.

RESOLUTION ON HEALTH EDUCATION

Doctor John P. Grady addressed the House on the resolution submitted by Doctor Jay M. Orson, Chairman of the Rhode Island Medical Society Child School Health Committee.

Action: A motion was made, seconded, and voted that the resolution, as submitted, be adopted.

RESOLUTION: CURRENT MEDICAL PROBLEMS

The Kent County Medical Society presented a resolution calling for the Rhode Island Medical Society to employ a public relations firm to assist in the presentation of the physicians' side of current medical problems to the community and that an appropriate assessment be levied to cover such expenses.

Action: A motion was made, seconded, and voted to refer this matter to the Council for consideration.

RESOLUTION: PROFESSIONAL LIABILITY INSURANCE

Doctor Charles L. Hill introduced a resolution which requested the Council, in cooperation with the liaison committee of the Rhode Island Bar Association, to explore the possibility of implementing a system of binding arbitration in cases of alleged malpractice.

Action: A motion was made, seconded, and voted to refer this matter to the Council for consideration.

RESOLUTION: LIMITATION OF TERMS FOR RIMS REPRESENTATIVES

Doctor Melvin D. Hoffman presented a resolution which asked the Council to consider, study and recommend to the House a mechanism by which terms of RIMS representatives to other groups or organizations and membership on Society committees be limited as to length of time.

Action: A motion was made, seconded, and

voted to refer this matter to the Council for consideration.

REPORT OF THE DELEGATE AND ALTERNATE DELEGATE TO THE AMA

The Speaker noted that the report of the delegate and alternate delegate, Doctors William J. MacDonald and John J. Cunningham, respectively, were included in the handbook. Doctor MacDonald supplemented the written report with a brief oral presentation and explained the AMA assessment of \$60.

Action: A motion was made, seconded, and voted to endorse the AMA \$60 assessment of its members and urge its support by Rhode Island physicians.

REPORTS OF COMMITTEES

The Speaker noted that there were many committee reports in the handbook for the information of the members, but none called for any specific action by the House.

Action: A motion was made, seconded, and voted that the written reports of the following committees, as submitted to the House, be received and placed on record:

Occupational Health
Peer Review
Mental Health
Allied Health Professions and Services
Alcoholism
Physicians & Carriers Workmen's Compensation
Medical Aspect of Sports
Scientific Work and Annual Meeting
Liaison Committee with Brown University
Emergency Medical Services
Highway Safety
Social Welfare

In addition to the written reports, Doctor Leo Stern, Co-Chairman of the Perinatal Mortality Committee, gave a verbal report on the committee's activities. Doctor William J. MacDonald, Chairman of the Society's Ad Hoc Committee on Unified Membership, reported that his committee had not yet held a meeting and it was his recommendation that the uniform membership proposal be held in abeyance until the AMA financial situation is stabilized. Mr. Norbeck reported for Doctor Howard S. Browne, Jr. that the Society's Continuing Medical Education Committee would be performing its first CMA Survey at R. I. Hospital on February 19.

Doctor Herbert F. Hager reported on the Advisory Committee meeting of the Tri-State Regional Medical Program which he attended recently. He

apprised the House of Delegates of some of the program expenditures.

ADJOURNMENT

The session was adjourned at 4 p.m.

Respectfully submitted:

CHARLES B. ROUND, M.D.

Secretary



Report Of The Meeting Of March 19, 1975

A regular meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Providence, on Wednesday, March 19, 1975. The meeting was called to order by the Speaker of the House, Doctor Herbert F. Hager, at 2:10 p.m.

Delegates in attendance were: Doctors David Newhall, Richard W. Perry, Charles P. Shoemaker, George Lewis, Richard Zuerner, Erwin Siegmund, Leonard S. Staudinger, Nathan Chaset, Stephen J. Hoyer, John P. Grady, Frank W. Sullivan, Edmund T. Hackman, Orlando Armada, D. Richard Baronian, Alphonse R. Cardi, Joseph E. Caruolo, George D. Charon, George N. Cooper, Dominic L. Coppolino, Frank E. DeLuca, Donald P. Fitzpatrick, Herbert F. Hager, Thomas F. Head, Charles L. Hill, Vincent I. MacAndrew, William J. MacDonald, H. Raymond McKendall, Raul Nodarse, James A. Reeves, Richard P. Sexton, Frank Sullivan, William R. Thompson, John J. Cunningham, Peter L. Mathieu, Jr., and Seebert J. Goldowsky in his capacity as Editor of the Rhode Island Medical Journal.

Delegates absent were: Doctors Robert Brogan, Joseph E. Wittig, Robert Fortin, Paul J. M. Healey, Richard Kraemer, Francis L. Scarpaci, J.

(Continued on next page)

E. P. ANTHONY, INC.

Druggists

WILLBUR E. JOHNSTON. Phar. D.

RAYMOND E. JOHNSTON. B.S.

178 ANGELL STREET

PROVIDENCE, R. I.

GAspee 1-2512

Pharmacy License No. 225

Gerald Lamoureux, George V. Coleman, Herbert Constantine, John A. Dillon, Joseph D. DiMase, Constantine Georas, Milton W. Hamolsky, Melvin D. Hoffman, Abraham Horovitz, Robert Indeglia, Joseph B. May, P. Joseph Pesare, Ralph F. Pike, Richard L. Testa, Elihu Wing, Jr., Joseph E. Cannon, and Arnold Porter. Doctors Robert E. Baute and Melvin Gelch were excused. Doctor Charles B. Round was out of town.

Commissioners in attendance were: Doctors Leonard S. Staudinger, Thomas F. Head and Richard P. Sexton.

Commissioners absent were: Doctors Kenneth Liffman and Melvin D. Hoffman.

Specialty Society Representatives in attendance were: Doctors Kenneth Nanian, Henry M. Litchman, David Hallman, Wilson F. Utter, Louis V. Sorrentino, Arthur I. Geltzer, Charles L. Hill, and Joseph E. Caruolo. Also Doctor George Anderson (substituting for Doctor Taylor).

Specialty Society Representatives absent were: Doctors Charles E. Millar, William F. Varr, Richard Peters, Bencel L. Schiff, Guy A. Settipane (excused), David M. Barry, Walter Cotter, and James T. Kurtis who was just named to replace Doctor Broderick.

Also present were: Tim Norbeck, Executive Director, Lance D. Taylor, Assistant Executive Director, and Ray Sullivan, Regional Director of the American Medical Association.

MOMENT OF SILENCE

The Speaker asked that the delegates rise for a moment of prayer in memory of Doctor Carl V. Anderson, delegate from Kent County, who had passed away recently.

APPROVAL OF MINUTES OF PREVIOUS MEETING

The Speaker noted that the minutes of the January meeting of the House had been printed and distributed by the Secretary.

Action: A motion was made, seconded, and voted that the report of the Secretary be approved and placed on record.

REPORT OF THE TREASURER

Doctor Frank W. Sullivan noted that his report was included in the handbook for the meeting.

Action: A motion was made, seconded, and voted that the report of the Treasurer be approved and placed on file subject to audit.

RECOMMENDATIONS FROM THE COUNCIL

The Speaker read the recommendations from the Council as published in the handbook for the meeting. Action was taken on the following items:

1. *Blue Cross Board Members*

Action: A motion was made, seconded, and voted that Doctors Joseph E. Caruolo and Herbert F. Hager be nominated as the Society's official representatives on the Blue Cross Board of Directors.

2. *Rhode Island Medical Journal*

Action: A motion was made, seconded, and voted to increase the Journal's yearly subvention from the Society from \$3,000 to \$5,000.

3. *Slate of Officers and Standing Committees*

No counter nominations were offered to the slate of Officers and Standing Committees proposed by the Council.

Action: A motion was made, seconded, and voted that the slate of nominees for Officers and Standing Committees, as submitted, be elected.

4. *Revision of ByLaws*

Action: A motion was made, seconded, and voted that the House approve of the bylaw revisions as submitted by the Council under Article VI, Section 2, as follows:

The phrase "...the President of the Rhode Island Medical Society Physicians Service" is deleted. The phrase "the Chairman of the Board of Directors of Blue Shield shall be a member of the House of Delegates when he is an active member of the Rhode Island Medical Society" is added.

COMMENDATION OF DOCTOR CHASET

Doctor Hager paid tribute to President Nathan Chaset for his strong leadership of the Society and led the delegates in a standing ovation in recognition of Doctor Chaset's efforts.

Action: A motion was made, seconded, and voted that the House of Delegates record its commendation of Doctor Nathan Chaset for his outstanding leadership of the Society during 1974-1975.

COMMENDATION OF DOCTOR GRADY

Doctor Hager commended Doctor John P. Grady for his diligent and distinguished efforts over the past year as Vice-President of the Society. The delegates joined Doctor Hager in according Doctor Grady a standing ovation.

COMMENDATION OF DOCTOR HAGER

Doctor Head noted that this meeting of the House of Delegates was the last one over which Doctor Herbert F. Hager would preside as Speaker. Doctor Head commended Doctor Hager for his outstanding work as Speaker and led the delegates in a rising vote of acclamation.

DELIVERY OF MEDICAL CARE COMMITTEE

Doctor Joseph E. Caruolo, Chairman of the Delivery of Medical Care Committee, briefly reviewed his report for the delegates.

Action: A motion was made, seconded, and voted to authorize the Council to pursue this matter of the feasibility of an HMO, IGAP type, and report back to the House of Delegates for further action.

OTHER COMMITTEE REPORTS

The reports of the Committees on Drug Abuse, Library, Liaison Committee with Brown University, State Committee on Peer Review and the Medical Aspects of Sports, as submitted in the handbook for the meeting were received and placed on record.

MALPRACTICE INSURANCE COVERAGE

President Chaset apprised the delegates of his plans to represent the Society at the Medical Malpractice Rate Hearing scheduled for Friday, March 21. He further explained that three separate pieces of legislation, all geared to alleviate the present malpractice insurance coverage problem, will be introduced at this session of the Rhode Island General Assembly.

"CHOKE-SAVER" LEGISLATION 75-H5444

Doctor Chaset discussed a bill recently introduced in the General Assembly by Representatives Kilmar, Piccerelli, Smith, Eugene O. Cook, Galvin and others on the subject of choke-saving devices in restaurants. He explained that the Public Laws Committee of the Society, at a meeting earlier in the day, had recommended endorsement of the legislation by the House of Delegates.

Action: A motion was made, seconded, and voted that the Rhode Island Medical Society endorse 75-H5444 and offer its assistance to the sponsors for helping to train restaurant personnel in the use of these devices.

FORMS

Doctor Peter L. Mathieu, Jr., mentioned a recent communication from Doctor Delfino complaining about the amount of paper work made necessary by third parties. Doctor Chaset said that he had asked Blue Cross-Blue Shield to inquire into the feasibility of providing practitioners with small plastic cards to facilitate the billing procedure but was told that it was not economically possible at this time. It was agreed that the Society should encourage efforts to reduce the amount of paper-work.

ADJOURNMENT

The House adjourned at 3:50 p.m.

Submitted by,
TIMOTHY B. NORBECK
(In the absence of Dr. Round)



Report Of The Emergency Meeting Of May 22, 1975

A special emergency meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Society auditorium, Providence, on Thursday, May 22, 1975. The meeting was called to order by the Speaker of the House, Doctor Thomas F. Head, at 8:15 p.m.

The Secretary dispensed with the calling of the role since the meeting was open to any interested member of the Society. Speaker Head secured unanimous consent from the House for any member of the Rhode Island Medical Society present to speak.

Doctor Stephen J. Hoyer, President of the Rhode Island Medical Society, told the House that the meeting was called solely to discuss the malpractice insurance crisis and reviewed the situation up to the present time. He then introduced Mr. Charles Butterfield, legislative counsel to the Rhode Island Medical Society, who explained the legislative climate existing in the State pertaining to the possible enactment of remedial legislation.

Doctor Melvyn Gelch introduced a resolution calling for a special session of the General Assembly which evoked considerable debate. After a lengthy discussion, the resolution was unanimously adopted by the House and it reads as follows:

Resolved, That the Governor and the leadership of the General Assembly call forthwith a special meeting of the General Assembly to consider and act upon legislation to deal with the crisis affecting the public and the physicians of Rhode Island with reference to medical malpractice liability and insurance.

President Hoyer concluded the meeting by stating that he would call another special meeting of the House of Delegates to reassess the situation

(Continued on next page)

MEDICAL MALPRACTICE INSURANCE AND UMBRELLA LIABILITY INSURANCE

For No Obligation Quotations or Assistance
CALL 751-3312

LEN DiPRETE

DUNCAN B. CAMPBELL CO.

9 So. Angell Street
Wayland Square, Providence, R.I.

Happy to make Home or Office Visits or give
Phone quotations

should the General Assembly fail to convene for a special session or fail in that session to enact appropriate remedial legislation.

ADJOURNMENT

The meeting was adjourned at 10:15 p.m.

Respectfully submitted:
CHARLES B. ROUND, M.D.
Secretary



Report Of The Special Meeting Of June 3, 1975

A special meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Society Auditorium, Providence, on Tuesday, June 3, 1975. The meeting was called to order by the Speaker of the House, Doctor Thomas F. Head, at 8:10 p.m.

Society President, Stephen J. Hoyer, M.D., introduced Governor Philip W. Noel to the House of Delegates prior to the official start of the session. Governor Noel spoke to the House for approximately fifteen minutes and answered questions for a half hour. The main thrust of his comments centered around his attempts to implement a Joint Underwriting Authority in the State of Rhode Island, a measure which would grant relief to the numerous physicians who find the "claims-made" concept, as proposed by St. Paul Fire and Marine Insurance Company, to be anathema to them. He stated that he was not prepared at this time to promise anything but would make every possible effort to create a Joint Underwriting Authority. The governor also commented on his newly formed "Commission on Malpractice" which he expected to hold its first meeting on June 5.

During the official proceedings, a number of statements were read by representatives of component and specialty societies pertaining to the malpractice insurance crisis. After lengthy discussion of two resolutions, it was the will of the House to give the Governor ten more days in which to work out details for a Joint Underwriting Authority and meet again in a special session on Friday, June 13.

ADJOURNMENT

The House adjourned at 11:40 p.m.

Respectfully submitted:
CHARLES B. ROUND, M.D.
Secretary



Peripatetics

ERMINO R. CARDI of Cranston, a surgeon, has been elected President-Elect of St. Joseph's Hospital medical staff, and appointed a member of St. Joseph's Board of Trustees.

Doctor Cardi is a diplomat of the American Board of Surgery, Secretary of the Providence Surgical Society.

* * *

F. A. SIMEONE is President-Elect of the New England Society for Vascular Surgery.

* * *

MARTIN E. FELDER was elected to membership in the New England Surgical Society.

* * *

IRVING GILSON, Chief of Medicine and Cardiology at St. Joseph's, participated in a "heart disease workshop" at the University of R. I. July 28. Doctor Gilson spoke on the "relationship of activity to heart disease," "work capacity testing," and related topics.



Join RIPSRO

♦ ♦ ♦

**MAKE YOUR VOICE
HEARD IN THE
REVIEW PROCESS**

♦ ♦ ♦

CURRENT MEMBERSHIP

1,125

♦ ♦ ♦

**40 Westminster Street
Suite 1730
331-6661**

LIBRIUM[®]

(chlordiazepoxide HCl)

FOR ALL THE RIGHT REASONS.

- prompt and specific action
- documented benefit-to-risk ratio
- three dosage strengths to meet most therapeutic needs



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental

alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* *Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium[®] (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose[®] packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs[®] (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRIUM[®]

chlordiazepoxide HCl/Roche

5 mg, 10 mg, 25 mg capsules

Please see following page.

LIBRIUM[®] **(chlordiazepoxide HCl)**

LIBRARY
APR 22 1976
NEW YORK ACADEMY
OF MEDICINE

FOR ALL THE RIGHT REASONS.

Yesterday's decision to use Librium for a clinically anxious patient was based on several good reasons. Safety. Effectiveness. Versatility. And the reasons you chose it yesterday are as valid today.

Librium has accumulated an unsurpassed clinical record. A record validated in several thousand papers published both here and abroad.

Librium, when used in proper dosage, rarely interferes with a patient's mental acuity or ability to perform. However, as with all CNS-acting agents, good medical practice suggests that patients be cautioned against hazardous activities requiring complete mental alertness.

Librium has an established safety record and a documented benefit-to-risk ratio. And Librium is used concomitantly with such drugs as cardiac glycosides, diuretics, anticholinergics and antacids.

So when you consider antianxiety therapy, consider Librium. It's a good choice. For today. And tomorrow.



PROVEN ADJUNCT FOR CLINICAL ANXIETY

LIBRIUM[®]
chlordiazepoxide HCl/Roche

Please see preceding page for summary of product information.

December 1975

R.I. Medical Journal

Vol. 58 No. 12

FALCONY



Both often



● Predominant psychoneurotic anxiety

● Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent

in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium[®]
(diazepam) 

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

cautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors or other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Rhode Island Medical Journal

DECEMBER, 1975

VOLUME 58, No. 12

EDITORIAL STAFF

Editor-in-Chief	Seebert J. Goldowsky, M.D.
Managing Editor	Timothy B. Norbeck
Ass't Managing Editor	Nancy Jo Cerep
Managing Editor Emeritus	John E. Farrell, Sc.D.

EDITORIAL BOARD

John F. W. Gilman, M.D., Chairman	Pierre M. Galletti, M.D., Ph.D.
John A. Dillon, M.D., Acting Chairman	*Robert V. Lewis, M.D.
Stanley M. Aronson, M.D.	Peter L. Mathieu, M.D.
Bertram H. Buxton, Jr., M.D.	Jay M. Orson, M.D.
Robert P. Davis, M.D.	Henry T. Randall, M.D.
Herbert Fanger, M.D.	Guy A. Settipane, M.D.

*On Sabbatical

TABLE OF CONTENTS

LABORATORY TESTS OF THYROID FUNCTION	
Milton W. Hamolsky, M.D.	497
COMMUNITY HEALTH PLANNING IN RHODE ISLAND FOLLOWING THE NAVY'S WITHDRAWAL	
William J. Waters, Ph.D.; Mary Pat Moore, M.A.; Stephen H. Sirota, M.A.; and Neil Young, M.A.	500
WHEN MEDICAL TECHNOLOGY FAILS	
Susan Trachtenberg	504
EDITORIAL	506
EDITOR'S MAILBOX	507
BROWN MEDICAL FACULTY ACTIVE IN SIGNIFICANT RESEARCH.....	489
PERIPATETICS	511
PHYSICIANS SEEKING OPPORTUNITIES IN RHODE ISLAND.....	512
AMERICAN RETIRED PHYSICIANS ASSOCIATION.....	513
REPORT OF THE HOUSE OF DELEGATES.....	514

RHODE ISLAND MEDICAL JOURNAL is owned and published monthly by the Rhode Island Medical Society, 106 Francis Street, Providence, Rhode Island 02903. Single copies 50 cents — Subscription \$5.00 per year (Members of the R. I. Medical Society, \$2.00 Annually). Second Class postage at Providence, Rhode Island, Copyright, The Rhode Island Medical Society, 1975.

NATIONAL ADVERTISING REPRESENTATIVE, State Medical Journal Advertising Bureau, Inc., 711 South Blvd., Oak Park, Ill. 60302. Ph:AC 312-383-8800.



BROWN UNIVERSITY

DIVISION OF BIOLOGICAL AND MEDICAL SCIENCES

Providence, Rhode Island 02912

863-3231

CONTINUING MEDICAL EDUCATION CALENDAR

JANUARY

- 6 BOARD REVIEW COURSE IN INTERNAL MEDICINE. Weekly topics will include Gastroenterology; Rheumatology; Immunology; Transplantation, Dialysis, Disorders of Bone Calcium, and Metabolism in Renal Failure; Hypertension; Fluid/Electrolytes; Glomerular Diseases; Non-Glomerular Parenchymal and Tubular Disease; Thyroid Disorders; Parathyroid and Metabolic Bone Disease; Adrenal Disorders; Pituitary, Hypothalamic and Gonadal Disorders; Cardiology; Oncology (Solid Tumors); Pulmonary Diseases; Infectious Diseases; Neurology; Diabetes Mellitus; Lipid Disorders and Cardiomyopathy; Red Blood Cells; Platelets and Coagulation; White Blood Cells. Tuesdays, 7:00 P.M. — 9:00 P.M., George Auditorium, Rhode Island Hospital. Registration fee is \$75.00 for residents, \$100.00 for practicing physicians. For information contact Mrs. Allen, 863-3337.
- 6 BOARD REVIEW COURSE IN PEDIATRICS. The agenda will be as follows: January 6, Oncology/Hematology; January 15, Pediatric Surgery; February 3, Metabolism and Fluid Therapy; February 19, Endocrinology; March 2, Cardiology; March 18, Neurology; April 6, Psychiatry; April 15, Adolescence; May 4, Allergy and Immunology; May 20, Neonatology. 7:00 P.M.-9:00 P.M., Medical Society Auditorium, 106 Francis Street. Further information can be obtained from the American Academy of Pediatrics, Rhode Island Chapter.
- 13 TUESDAY EVENING SEMINAR ON NEONATOLOGY. 7:30-9:00 P.M., January 13-February 10. Topics will include: Management of Distress Infants in the First Hours of Life; The Use and Misuse of Antibiotics in The Newborn Infant; Bilirubin Metabolism and Prevention of Kernicterus; Prevention of Developmental Disability; and Metabolic Problems in Neonate-Hypoglycemia and Hypocalcemia. Faculty include: William Oh, M.D., David O. Hakanson, M.D., Georges Peter, M.D., Leo Stern, M.D., William J. Cashore, M.D., Siegfried Pueschel, M.D., Betty Vohr, M.D., Janice Ouimette, R.N., M.S., Doris J. Biester, R.N., M.S., Robert Schwartz, M.D., Richard M. Cowett, M.D. For information contact: Ms. Babcock, Division of Perinatal Medicine, Women and Infants Hospital.
- 14 ADVERSE DRUG REACTIONS: A COMMUNITY HEALTH PROBLEM. Speakers are: Herschel Jick, M.D., Associate Professor of Medicine, Boston University Medical Center; Daniel L. Azarnoff, M.D., Professor of Medicine and Pharmacology, University of Kansas Medical Center; Parker Staples, M.D., Assistant Professor of Medicine, Brown University. Also, William H. Golod, Ph.D., Dean, School of Pharmacy, Medical University of South Carolina; Irving Beck, M.D., Lecturer in Medicine, Brown University; Norman A. Campbell, J.D., M.D., Chairman, Department of Pharmacy Administration, Uni-

versity of Rhode Island. Sponsors are the Brown University Program in Medicine, the University of Rhode Island College of Pharmacy, and Rhode Island Health Science Education Council. Registration fee is \$20, lunch included. The deadline is December 30, 1975. For information contact Mrs. Allen, 863-3337.

- 16 IRON DEFICIENCY ANEMIA IN INFANCY AND CHILDHOOD. Howard Pearson, M.D., Professor and Chairman, Department of Pediatrics, Yale University School of Medicine, 10:30 A.M., Kay Auditorium, Roger Williams General Hospital.

COMING EVENTS

FEBRUARY

- 13 CLINICAL ACID-BASE PHYSIOLOGY AND PARENTERAL NUTRITION AND RENAL DISEASES. James C.M. Chan, M.D., Associate Professor, Department of Child Health and Development, George Washington School of Medicine, Kay Auditorium, Roger Williams General Hospital, 10:30 A.M.
- 18 PERSPECTIVES IN GENETICS AND GENETIC COUNSELLING. Topics to be covered include: "Intra-Uterine Diagnosis," Henry L. Nadler, M.D., Given Research Professor, Northwestern University; "Screening of Inherited Metabolic Disorders," Charles R. Scriver, M.D., Professor of Pediatrics, Associate Professor of Genetics, McGill University; "Tay-Sachs Disease: Rhode Island's Screening Program," Daniel P. Perl, M.D., Assistant Professor of Pathology and Laboratory Medicine, Brown University; "Problems of Parents Whose Children Have Metabolic and Genetic Disorders," Siegfried M. Pueschel, M.D., Assistant Professor in Pediatrics, Brown University; and "Medical Implications of Chemical Mutagenesis," Marvin S. Legator, Ph.D., Professor of Genetics (Research), Brown University. The Providence Marriott, 8:30-5:00. Registration will be \$25.00. For information call Mrs. Allen, 863-3337.

Brown Medical Faculty Active In Significant Research

The annual regional meeting of the American College of Physicians was held at the Brown University Medical School early in November. All of the 16 scientific papers presented during the two-day sessions were given by members of the Brown medical faculty.

Progress in devising better diagnostic tests and thus crucially important earlier treatment for failure of the immune system was discussed by Doctor Patricia Farnes of Rhode Island Hospital and Doctor Zbigniew A. Zawadzki of Pawtucket Memorial Hospital, both of them associate professors of medicine at Brown.

Doctor Francis J. Cummings of Rhode Island Hospital, an assistant professor of medical science, said it may be possible to develop a vaccine to protect people against cancer by stimulating the production of antibodies which would attack malignant cells.

In reporting on advances in the development of anti-cancer drugs, Doctor Robert E. Parks, Jr., a professor of medical sciences, said remissions can now be obtained in many forms of malignancy with combinations of effective chemicals and "we can begin to think in terms of cures." Parks and Doctor Paul Calabresi, physician-in-chief at Roger Williams Hospital and also a Brown professor of medical science, are heading up a team which has been engaged for several years in a massive federally-financed search for anti-cancer medications.

The review of progress in cardiology included a paper by Doctor George N. Cooper of Rhode Island Hospital, an assistant professor of surgery, on the use of ballons to pump blood through failing hearts and a report by Doctor Irving T. Gilson, chief of medicine at St. Joseph's Hospital and a clinical instructor of medicine at Brown, on the brightening prospects for the rehabilitation of heart attack victims.

Doctor Max Bloom, a clinical assistant professor of medicine, described a machine he has developed in collaboration with Elmuth Etzold, an electronic engineer, for recording and analyzing heart sounds which are otherwise inaudible.

Doctor Milton W. Hamolsky, physician-in-chief at Rhode Island Hospital and professor of medical science, reported the discovery of a new hormone from the thyroid gland which controls calcium in bones and in the blood stream and is effective in treating Paget's disease, a deforming condition of

the bone and nervous system. He also described a new test for the diagnosis of thyroid overactivity.

The use of a highly purified synthetic diet, developed for the space program and later perfected for clinical purposes at Rhode Island Hospital, was described by Doctor Henry T. Randall, the hospital's chief of surgery and a professor of medical science.

Significant experiments which could produce a breakthrough in the treatment of diabetes, one of the most widespread diseases, were discussed by Doctor Charles B. Kahn, a clinical assistant professor of medicine.

Doctor Pierre M. Galletti, Brown's vice president for biology and medicine and a professor of medical science, also is a widely respected researcher in the field of organ transplantation. At one of the sessions he reviewed advances in the development of artificial lung membranes which already are saving the lives of many patients whose lungs have been irreparably damaged and who are in acute respiratory failure.



Adverse Drug Reactions:

A COMMUNITY HEALTH PROBLEM

January 14, 1976

The Providence Marriott Inn

Sponsored by: Brown University Program in Medicine,
University of Rhode Island College of Pharmacy, Rhode
Island Health Science Education Council.

AGENDA AND SPEAKERS

- 9:00 Introductory Remarks
- 9:10 Epidemiology of ADR's—The Scope of the Problem
- 10:10 Drug interactions and Multiple Drug Administration
- 11:30 Allergic Reactions
- 12:00 Audience Questions and Discussion
- 1:30 Pharmacists' Activity Toward Reducing ADR's
- 2:30 The Practicing Physician's View of the Problem
- 3:15 Legal Liability and Adverse Drug Reactions
- 4:00-5:00 ADR's in Rhode Island: Problems and Proposals Panel

Application has been made for Continuing Education Credits for Physicians, Nurses, and Pharmacists.

Registration is required prior to January 7, 1976. The fee of \$20.00 includes lunch. Checks should be made out to Brown University Continuing Medical Education and should be included with the registration. Please mail to Mrs. Allen, Box G, Brown University, Providence, R. I. 02912.

L LEARY LABORATORY

EKG: This service is now available by appointment on house calls and at our 189 Governor St. Laboratory.

Profile 11: A new inexpensive grouping of the procedures that physicians in this area frequently order to obtain a general profile of their patients, without appointment. The fee is \$16.50 which includes the following tests:

Albumin	Alk. Phos.
Glucose	Cholesterol
BUN	Uric Acid
Calcium	Total Protein
LDH	Total Bilirubin
SGOT	Phosphate

Triglycerides
T4

Hemogram

(RBC, WBC, Hematocrit,
Hemoglobin, MCV, MCH, MCHC)

L LEARY LABORATORY, INC.
43 Bay State Road, Boston, MA 02215

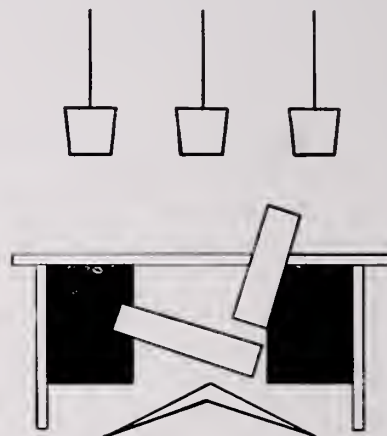
THREE PROVIDENCE LOCATIONS

655 Broad St. — 7:30-5:00 Mon.-Fri.
189 Governor St. — 9:00-5:00 Mon.-Fri.
111 Plain St. — 9:00-5:00 Mon.-Fri.
9:00-11:00 Saturday

Attractive & Functional Offices

by **BENÉ & CO.**

Division of National Office Supply Co.



Designers & Suppliers of Offices

36 Branch Avenue Providence, R. I. 02904
(Jct. No. Main St.) Gaspee 1-5228

FOR SALE Home and Professional Office

Garden City area, Cranston, R. I.

FOR DOCTOR — DENTIST — OR LAWYER

First Floor — Large Waiting Room, Four Offices, Receptionist Area and Lavette

Second Floor — Living Room, 3 Bedrooms, Appliance Kitchen, Full Bathroom.

Ample Parking

Many Extras

Shown by Appointment by Owner

CALL 944-0605

DYAZIDE

MAKES SENSE

Trademark

® Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F) and 25 mg. of hydrochlorothiazide.

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K⁺ and BUN should be checked periodically. (See Warnings Section.)



Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Warning

This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: Edema: That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. **Mild to moderate hypertension:** Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has

been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and

BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation



the "empty nest syndrome"

TRIAVIL[®]
containing perphenazine and amitriptyline HCl
a tranquilizer-antidepressant

for depression with moderate anxiety

in many cases a result of the "empty nest syndrome"

The mid-life crisis: a critical crossroad

Preparation for change—intellectually, vocationally (or avocationally), and emotionally—can often help the menopausal-aged woman cope successfully with a new and different role after the children are grown and gone. Even when these changes have been anticipated and prepared for, a mid-life depression with moderate anxiety is not uncommon—a syndrome often uncontrolled by counseling or other appropriate measures and for which specific medication may be required.

When depression with moderate anxiety persists, TRIAVIL can often help

TRIAVIL provides a highly effective antidepressant and tranquilizer for symptomatic relief of *both* depression and coexisting moderate anxiety. The patient may be able to function more effectively in her daily life.

Many symptoms associated with depression and anxiety such as insomnia, fatigue, anorexia, and functional G.I. complaints, are frequently alleviated. More complete symptomatic relief is usually afforded than with an antidepressant or a tranquilizer alone. In fact, when anxiety masks the depressive state, treatment with just a tranquilizer may deepen the depression and delay symptomatic improvement.

Advantages of the two components in TRIAVIL taken together

A single tablet containing both an antidepressant and a tranquilizer encourages patients to take medication properly and reduces the risk of dosage confusion and error. Cost of therapy to the patient is usually less. To date, clinical evaluations have revealed no undesirable reactions peculiar to the combination. Tablets TRIAVIL are available in four different combinations affording flexibility and individualized dosage adjustment.

Treatment with TRIAVIL—a balanced view

Contraindicated in CNS depression from drugs; in the presence of evidence of bone marrow depression; and in patients hypersensitive to phenothiazines or amitriptyline. Should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. The drug may impair mental or physical abilities required in the performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to other drugs or mask other disorders. Since suicide is a possibility in any depressive illness, patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

MSD
MERCK
SHARP
DOHME

For additional prescribing information, please turn to the following page.

for highly effective relief
of depression with moderate anxiety

TRIAVIL®

containing perphenazine and amitriptyline HCl
a tranquilizer-antidepressant

Available:

TRIAVIL® 2-25: Each tablet contains
2 mg perphenazine and 25 mg amitriptyline HCl

TRIAVIL® 2-10: Each tablet contains
2 mg perphenazine and 10 mg amitriptyline HCl

TRIAVIL® 4-25: Each tablet contains
4 mg perphenazine and 25 mg amitriptyline HCl

TRIAVIL® 4-10: Each tablet contains
4 mg perphenazine and 10 mg amitriptyline HCl

INITIAL THERAPY FOR MANY PATIENTS

TRIAVIL® 2-25 (or TRIAVIL® 4-25) t.i.d. or q.i.d.

FOR FLEXIBILITY IN ADJUSTING MAINTENANCE THERAPY

TRIAVIL® 2-10 (or TRIAVIL® 4-10)

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Do not give concomitantly with MAOI drugs because hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. Allow minimum of 14 days between therapies, then initiate therapy with TRIAVIL cautiously, with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

WARNINGS: TRIAVIL should not be given with guanethidine or similarly acting compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, particularly in high doses, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Caution patients performing hazardous tasks, such as operating machinery or driving motor vehicles, that drug may impair mental and/or physical abilities. Not recommended in children or during pregnancy.

PRECAUTIONS: Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

Perphenazine: Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides.

Amitriptyline: In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy.

Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Side effects may be any of those reported with phenothiazine drugs: extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e.g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements). Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. It has been suggested that fine vermicular movements of the tongue may be an early sign of the syndrome, and that the full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude, muscle weakness, mild insomnia. Other adverse reactions reported with various phenothiazine compounds include blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); grand mal convulsions; cerebral edema; polyphagia; photophobia; skin pigmentation; and failure of ejaculation.

Amitriptyline: Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness; weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; jaundice; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

OVERDOSAGE: All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

For more detailed information, consult your MSD Representative or see full Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

MSD
MERCK
SHARP &
DOHME

Pretend it's 1945. Would you invest in Kodak?



When it comes to making investment decisions, there's nothing like 20 or 30 years' hindsight.

And when it comes to judging the performance of your investments, it's the long term that counts.

The life of a trust represents years of investment decisions whose cumulative effect is far-reaching. And the record of Industrial National Bank's Trust Department is your best assurance that that effect will be positive one.

We take a back seat to no one in the business of professional

financial management. And we're proud of our consistent long-term performance record.

In fact, we'd like to discuss that record with you, and to show you how our combination of the right people, the right philosophy, and the right organization can bring a realistic new performance orientation to the management of your investments.

Call Mr. Evans at 278-6607.
Trust Department, Industrial
National Bank, 100 Westminster St.,
Providence, Rhode Island 02903.

IN BANK

Industrial National Bank

Something extra in Investment Management.

Hopkins

Profile "20"

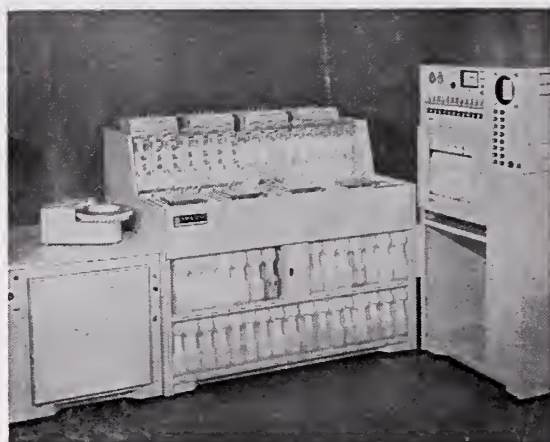
Results in
Lowering Medical Costs

Profile "20" includes the following:

CALCIUM	ALK. PHOSPHATASE
INORGANIC PHOSPHATE	LDH
GLUCOSE	SGOT
UREA NITROGEN	HEMOGLOBIN
UREA ACID	HEMATOCRIT
CHOLESTEROL	WHITE BLOOD COUNT
BILIRUBIN	RED BLOOD COUNT
TOTAL PROTEIN	MCH
ALBUMIN	MCV
GLOBULIN	MCHC

ALL 20 PROCEDURES

\$15.00



Hopkins Medical Laboratory

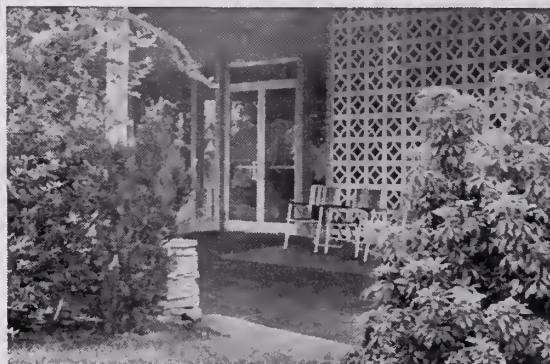
335 BROADWAY
PROVIDENCE, R. I. 02909 TEL. 421-3100

DIRECTOR
ANGELO VITICONTE, A. B. M. T.

ASCANIO DI PIPPO DONALD MATTERA
Ph. D. B.S. M.T. (ASCP)

HEALTH HAVENS

A SKILLED NURSING HOME
MEDICARE PARTICIPATING



Registered Professional Nurses On All Shifts

Dietician

Physiotherapist

Organized But Open Medical Staff

Ethically Managed

100 Wampanoag Trail East Providence

Tel. 438-4275

JCAH Accredited

NOTICE

ALL PHYSICIANS IN RHODE ISLAND!!

CHANGING ECONOMIC CONDITIONS,
INCREASING LOSS RATIOS
and

INSUFFICIENT PREMIUM RESERVES
ARE BEGINNING TO BRING ABOUT
DRASTIC CHANGES

in

NATIONAL AND REGIONAL
ASSOCIATION GROUP DISABILITY
INCOME POLICIES!!

Those Members who would like further information of the impending problems of "Mail-Order" Insurance which lie just ahead may obtain further information by contacting us via 'phone or mail

— NO OBLIGATION —

R. A. DESROSIER AGENCY

215 Waterman Avenue
East Providence, Rhode Island
Tel. 438-0660

Famous Fighters



JOHN L. SULLIVAN
Bare-knuckles heavyweight champion
1882-1892

NEOSPORIN® Ointment (polymyxin B-bacitracin-neomycin) is a famous fighter, too.

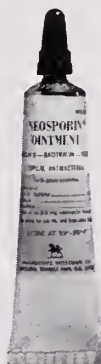
Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to



neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

MALPRACTICE QUESTIONS

**Depend on Starkweather & Shepley
for the answers and help**

Hundreds of Rhode Island physicians rely on us because we're insurance experts. As agents, we've spent years solving all types of professional and personal insurance problems for the medical community. And you can depend on us to help you through periods of uncertainty...Starkweather & Shepley for answers and help.



ESTABLISHED 1879

Starkweather & Shepley INC.

Complete Business & Personal Insurance, Pension & Estate Planning
Representing the World's Major Insurance Companies.

155 South Main Street, Providence, Rhode Island 02903, Telephone (401)421-6900



Wherever you go,
forget your telephone
calls. We'll take them
for you, day or night.

MEDICAL BUREAU
of the
Providence Medical Association

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritat-

ing symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or



Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® relieve stuffiness, drip and congestion.*

*

INDICATIONS

Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the following indications as lacking substantial evidence of effectiveness as a fixed combination: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower

respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihista-

mines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

A-H-ROBINS

A. H. Robins Company, Richmond, Va. 23220

when pain goes on... and on... and on—



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides $\frac{1}{4}$ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen[®] with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital ($\frac{1}{4}$ gr.), 162 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, $\frac{1}{4}$ gr. (No. 2), $\frac{1}{2}$ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

Ⓜ Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. **A·H·ROBINS**

OFFICE SPACE FOR RENT

THE 111 PLAIN ST. MEDICAL BUILDING
is a newly renovated construction within
eye-view and two minutes' walk of the
RHODE ISLAND HOSPITAL

and less than six minutes' drive from

BROWN U. MEDICAL SCHOOL

ROGER WILLIAMS HOSPITAL

MIRIAM HOSPITAL

VETERANS HOSPITAL

and a little longer from the

LADY OF FATIMA — ST. JOSEPH'S COMPLEX

Offices include carpeting, electric heating, air-conditioning, electronic protection, elevator, janitorial services, laboratory and x ray services.

**FOR APPOINTMENT
CALL 331-6317 ANYTIME**

Join RIPSRO

• • •

**MAKE YOUR VOICE
HEARD IN THE
REVIEW PROCESS**

• • •

**Current Membership
1,125**

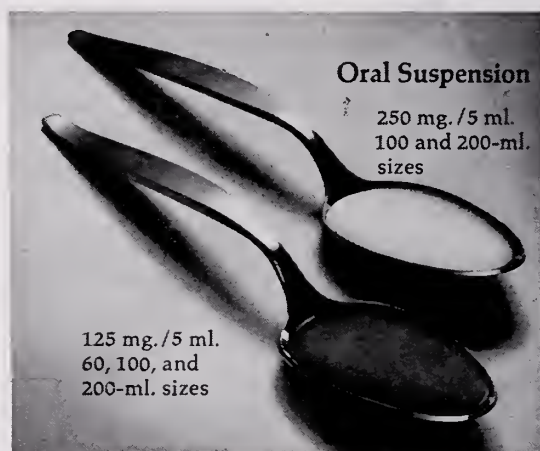
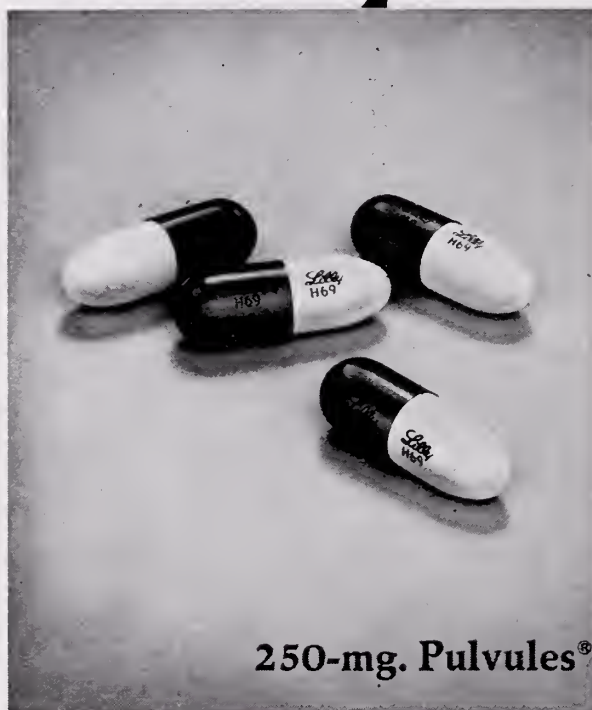
• • •

40 Westminster Street
Suite 1730
331-6661

Plan Now To Celebrate The 129th Annual Meeting of the Providence Medical Association Wednesday, January 21, 1976 Colonial Hilton Inn, Cranston, R.I.

A Meeting and Dinner Dance to which all Members and their Spouses are
invited. Music will be provided by RALPH STUART'S ORCHESTRA.

easy to take



Keflex®

cephalexin



506738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Laboratory Tests Of Thyroid Function

Appropriate Studies Supplementing History And Physical Will Provide A Rational Basis For Diagnosis And Treatment

By Milton W. Hamolsky, M.D.

Today's knowledgeable physician deals with diseases of function of the thyroid gland from a position of diagnostic and therapeutic strength. The spectrum of clinical symptoms and signs of both hyperthyroidism and hypothyroidism has been well delineated. Curative therapy is available — anti-thyroid goitrogen, thyroidectomy, or radioactive iodide therapy for hyperthyroidism and specific and effective thyroactive compounds for the treatment of hypothyroidism. This review will attempt to summarize selectively the link between the clinical manifestations which first suggest the diseased states and the ultimate therapeutic resolution, namely, the principal laboratory tests of thyroid function.

Rational selection and use of thyroid function tests depend upon understanding of the following schematized parameters of thyroid function and iodide metabolism:

Step One — Circulating inorganic iodide ion is selectively taken up by the thyroid follicular cell. The major competing pathway is urinary excretion. Following its uptake, iodide is converted to an organic form and, almost immediately, incorporated with the ubiquitous amino acid, tyrosine, to form

MILTON W. HAMOLSKY, M.D., *Physician-in-Chief and Director of Division of Medical Research, Rhode Island Hospital; Professor of Medical Sciences, Brown University.*

This is one of a series of papers supported by the Continuing Education Program of the Rhode Island Health Science Education Council.

initially monoiodotyrosine (MIT). Another iodine atom is promptly added, forming diiodotyrosine (DIT). Two molecules of DIT are then “coupled” to form tetraiodothyronine (or thyroxine) with four iodine atoms (T-4). A small amount of the triiodinated thyronine molecule is also formed, known as triiodothyronine (T-3). T-4 and T-3 constitute “the thyroid hormones,” released into the circulation. A significant additional source of T-3 is peripheral deiodination of T-4.

For clinical purposes, the above parameters are usually measured by the uptake of radioactive iodide — generally performed over a 24-hour period. Normal thyroid function is reflected by a 24-hour radioactive iodide uptake of about 15 to 35 per cent of the ingested dosage, hyperthyroidism by an uptake greater than 35 per cent, and hypothyroidism, usually less than 10 per cent. This basic measurement of iodide uptake also forms the basis (see below) for 1) the TSH stimulation test, 2) the suppression test, and 3) the perchlorate (or thiocyanate) discharge test.

Step Two — Following discharge from the thyroid gland, T-4 and T-3 are bound highly selectively to trace plasma proteins — 1) thyroxine binding globulin (TBG), 2) thyroxine binding prealbumin (TBPA), and 3) a small albumin moiety. T-4 is bound very firmly, T-3 much more loosely, explaining the more rapid disappearance of T-3 from the circulation into the tissues and its greater resultant biological activity.

(Continued on Next Page)

Several tests measure this parameter of thyroid function, including:

1) Serum protein bound iodine level (PBI). Determination of the amount of organic iodine bound to the specific proteins reflects the concentration of T-4 (about 95 per cent of the PBI) and T-3 (about 5 per cent) in the circulation. Euthyroid values usually range from 4 to 8 micrograms per 100 milliliters, are elevated in hyperthyroidism, lowered in hypothyroidism. The value is spuriously elevated in 1) patients who have received forms of iodide or iodine, 2) pregnancy, 3) patients receiving estrogens, 4) liver diseases, and 5) families with congenital excess of TBG. Serum PBI is spuriously lowered in 1) nephrosis (due to lack of binding protein), 2) starvation, 3) dilantin administration, 4) anticoagulation, 5) congenital lack of TBG, and 6) certain non-specific "sick" patients.

2) Serum T-4 levels (measured by radioimmunoassay or in a competitive binding test method). The average values range from 5 to 12 micrograms per 100 milliliters as thyroxine, or 3.3 to 6.3 as T-4 iodine, are not affected by exogenous iodine containing compounds, but are increased or decreased respectively in instances of increased or decreased TBG binding.

3) Serum T-3 level. This is a new test, measuring the actual concentration of circulating triiodothyronine by radioimmunoassay. Euthyroid values are not firmly established yet, but range generally from 170-270 nanograms per 100 milliliters as T-3, or 100-160 nanograms per 100 milliliters as T-3 iodine. This is particularly important to the clinician since several patients with normal PBI or T-4 levels have been demonstrated to have hyperthyroidism due to an excess T-3 level — so called "T-3 toxicosis." Similarly, patients may be euthyroid with a low serum PBI or T-4 when they have a normal serum T-3 level.

4) The in-vitro T-3 uptake test. This is the more familiar "T-3 test" which must be carefully differentiated from the above serum T-3 level. For this test, a tracer amount of radioactive T-3 is added to the serum, binding virtually instantaneously to TBG. A competitive binder is added (resin or red cells or charcoal) and the amount of radioactive T-3 released from TBG and "taken up" by the resin, red cell, or charcoal is determined. The "uptake," therefore, reflects primarily the binding capacity of TBG and TBPA and is not a measure of serum T-3 concentration. In the widely used sponge-resin uptake method, normal uptakes vary

between 25 to 35 per cent. Uptake values are increased in hyperthyroidism, reflecting a diminished residual binding capacity of TBG and TBPA. In hypothyroidism conversely, the uptake is decreased, reflecting increased serum binding, less available to be "taken up" by the resin. Uptake tests are spuriously lowered in pregnancy, estrogen administration, congenital increase of binding proteins, certain cases of liver disease, phenothiazene use, acute porphyria — all due to an increase in the binding protein capacity. Uptakes are spuriously elevated when binding capacity is diminished as in nephrosis, anticoagulant administration, acidosis, dilantin administration, and large doses of aspirin.

Thus, in hyperthyroidism, both serum T-4 (or PBI) and T-3 uptake values are increased; in hypothyroidism, both T-4 (or PBI) and T-3 uptakes are decreased. The combination of *increased* T-4 (or PBI) and *decreased* T-3 uptake represents increased binding of hormone by the plasma proteins, *decreased* T-4 (or PBI) and *increased* T-3 uptake indicates decreased plasma protein binding.

It is noteworthy that the T-3 uptake is normal or low in the syndrome of "T-3 toxicosis" which is due to increased circulating levels of T-3. Because triiodothyronine is so loosely bound to TBG, the T-3 uptake test reflects chiefly the saturation of binding sites by T-4. Since T-4 is normal or low in this syndrome, the T-3 uptake is not increased in T-3 toxicosis.

Step Three — from the transport protein, T-4 and T-3 enter into the peripheral tissues to effect the ultimate biological actions of thyroid hormones. This overall metabolic effect is reflected by the traditional basal metabolic rate (BMR), and the serum cholesterol level, the serum tyrosine levels, and the relaxation phase of certain reflexes.

Serum cholesterol is not a useful test of thyroid function per se, but is highly useful in differentiating primary hypothyroidism in which serum cholesterol is almost always elevated from secondary or pituitary hypothyroidism in which the serum cholesterol is almost always normal or low. Although the rate of reflex contraction and relaxation is generally rapid in hyperthyroidism and retarded in hypothyroidism, a single quantitative measurement of these phases in a specific individual is not a reliable diagnostic index of thyroid function.

Step Four — The above processes are normally under the control of the thyroid stimulating hormone (TSH) from the anterior pituitary gland which stimulates the uptake of iodide by the thy-

roid, its conversion to the thyroid hormones, and their release from the thyroid gland into the circulation. This forms the basis of the TSH stimulation test, useful in differentiating primary hypothyroidism (disease of the thyroid gland itself) from secondary hypothyroidism due to pituitary deficiency. In either instance of hypothyroidism, the 24-hour I-131 uptake is low. Following administration of TSH by a standard protocol, failure of the 24-hour I-131 uptake to increase indicates primary hypothyroid disease; when the hypothyroidism is due to failure of pituitary release of TSH, exogenous administration of TSH results in a striking increase of the I-131 uptake over the low control value. Serum TSH level can now be accurately measured by radioimmunoassay. The normal range is 0-10 micrograms per 100 ml. This is elevated in primary hypothyroidism (return to normal range may be considered the most accurate laboratory index of adequacy of replacement thyroid hormone therapy), whereas it is virtually absent in secondary hypothyroidism.

More recently we have learned that the pituitary gland is under the control of a hormone from the hypothalamus (thyroid releasing hormone [TRH]), a simple tripeptide (glutamic acid, histidine, proline) which controls the synthesis and release of TSH. Thus, it is now possible to differentiate in the instance of secondary hypothyroidism whether the deficiency is due to failure of the pituitary to release TSH when TRH is administered, or alternatively indicates that the deficiency is in the hypothalamus, when the administration of TRH promptly causes the release of TSH, which in turn increases the 24-hour I-131 uptake. It may not be of great clinical significance to differentiate the specific localization of the defect since the physician will treat the patient with thyroid hormone in either instance. However, it may be most useful in 1) indicating the need for added cortisol therapy in cases of secondary hypothyroidism, and 2) suggesting the presence of a pathological disorder either within the hypothalamic area when TRH corrects the deficit, or in the anterior pituitary when TRH fails to correct the deficit while substitution of TSH corrects it. The clinician is thus provided with a more precise method of localizing the site of the pathological disorder in the hypothalamus, the pituitary, or the thyroid gland.

Step Five — The circulating levels of T-4 and T-3 modulate the release of TRH and TSH in a negative feedback mechanism. Thus, in the normal individual, excess thyroid hormone, either physio-

logically induced or resulting from exogenous thyroid hormone administration shuts off the action of TRH and TSH, thus blocking the 24-hour I-131 uptake. Similarly, deficiency of circulating thyroid hormone leads to an increased output of TRH and TSH, resulting in an increased I-131 uptake. These considerations form the basis for the suppression test. In this maneuver a 24-hour I-131 uptake is performed. Subsequently, the patient is given thyroactive material, either 75 to 100 micrograms of T-3 daily for seven to ten days or 0.2 mg. of synthetic thyroxine or two grains (120 mg) of desiccated thyroid extract daily for three to four weeks, followed by another I-131 uptake. In the normal individual, the second uptake will be strikingly reduced by the administration of the thyroid hormone which causes the negative feedback shutoff of TSH secretion. As the most sensitive test of mild or early hyperthyroidism, administration of thyroid hormone fails to decrease the I-131 uptake. Thus, in the appropriate clinical settings, if the second I-131 uptake is as high as the first after adequate thyroid administration, or is not lowered to at least 50 per cent of baseline, there is indication of hyperthyroidism or an autonomous nodule in the thyroid, or the type of exophthalmos related to abnormal hypothalamic-pituitary-thyroid function.

Based on the above considerations, the clinician, suspecting thyroid dysfunction, has an extensive diagnostic armamentarium. In practical clinical terms, the following approach is recommended:

In *hyperthyroidism* the serum T-4 (or PBI) and T-3 uptake levels are usually elevated. Additionally, one may perform the 24-hour I-131 uptake and, if it is also elevated with the appropriate clinical manifestations, the diagnosis is confirmed. If, despite clinical manifestations, T-4 and T-3 uptake are normal, an elevated serum T-3 level and I-131 thyroid uptake will indicate T-3 toxicosis. In borderline cases the failure of exogenous thyroid hormone to suppress a 24-hour I-131 uptake is strongly indicative of mild or early hyperthyroidism or that form of exophthalmos ultimately related to abnormal pituitary-thyroid function. Scanning of the thyroid gland following administration of radioactive iodide will indicate whether the hyperthyroidism is due to a diffuse toxic goiter, when the scan will reveal diffuse homogeneous uptake throughout an enlarged gland, or toxic nodular goiter, when the I-131 will be selectively concentrated in the palpable nodule.

In *hypothyroidism* the serum T-4, PBI, T-3 uptake, serum T-3 level, and I-131 uptake will usu-

(Continued on Page 509)

Community Health Planning In Rhode Island Following The Navy's Withdrawal

Relationship Between Economic Adversity And Deterioration Of Health And Health Services Appears To Be Confirmed By Present Study

By William J. Waters, Ph.D., Mary Pat Moore, M.A., Stephen H. Sirota, M.A., and Neil Young, M.A.

Officials within the United States Department of Defense began working on a "base realignment" package in October of 1971 with the objective of consolidating Naval bases along the East Coast. On April 17, 1973 a Pentagon report disclosed the following intended changes for Rhode Island: 1) The Quonset Point Naval Air Station and the Charlestown Auxiliary Naval Air Station would close, 2) The Newport Naval Base fleet activities would be drastically reduced, and 3) The Construction Battalion Center at Davisville would be reduced to a "caretaker status." These decisions, which became effective in June 1973, represented one of the largest military cutbacks ever affecting any one state.

In a state whose total workforce numbers only 415,000, the impact of the Shore Establishment Realignment (SER) was swift and substantial. Base closures in Rhode Island, most of which took place over a brief one-year period, accounted for some 6,000 civilian and 17,300 military positions eliminated.¹ The unemployment rate in Rhode Island at the time of the final SER decision was 6.7 per cent. Eighteen months later the unemployment rate had risen to 10.5 per cent, 3.8 per cent higher than

the national rate. The personal income loss to civilian residents of Rhode Island as a direct result of the combined cutbacks at Quonset, Davisville, and Newport was estimated to be \$60.6 million. If this is combined with the \$230.6 million loss of military salaries and allotments, the total income loss to Rhode Island as a result of SER was approximately \$300 million, which represents a loss of 6 per cent of the 1972 Gross State Product.²

Immediately following the Navy's announcement of the Shore Establishment Realignment (SER) the Governor's Task Force for Economic Conversion, a broadly based citizen's advisory group, was created. At the same time an Economic Renewal Coordinating Center (ERCC), a temporary staff group in the Governor's office to coordinate planning for conversion of the Navy base properties, was instituted. The ERCC issued its assessment of economic and social impacts in July 1974.³ At the same time the Governor obtained a grant from the Tri-State Regional Medical Program to assess the impact of SER on the health system of the State.

An in-depth analysis of the impact on health and medical care seemed warranted by the magnitude of Navy medical reductions and shifts. The District Medical Office of the Navy, formerly located in Boston, was moved to Newport in December of 1973. In February 1974 the Secretary of the Navy approved the disestablishment of the Naval Hospital in Newport as a separate command and consolidated it as the Naval Regional Medical Center (NRMC). However, due to the Navy's realignment program, the NRMC experienced a contraction in

This paper is adapted from the Core Staff Final Report of the Economic Transition Project, Rhode Island Department of Health. The Project Director was John T. Tierney, Deputy Director of Health. William J. Waters was the Principal Investigator for the Project, and the other authors were all planners with the Project. The Economic Transition Project was operational from September 1974 through August 1975. It was funded through a project grant awarded to the Honorable Philip W. Noel, Governor of Rhode Island, by the Tri-State Regional Medical Program.

staff and operations. Further, the Quonset Point Naval Hospital closed in March 1974. It had served some 10,200 active duty personnel and dependents, plus 9,900 retired military personnel and dependents. The NRMHC, Newport became the only source of Naval medical care for retirees and their dependents on August 14, 1974. The Davisville Dispensary continued servicing active duty personnel and civil service employees until its closing in June 1975.

OBJECTIVE

A specific unit within the Rhode Island Department of Health, the Economic Transition Project (ETP), was organized in September 1974 to undertake community health studies related to the Navy's exodus from Rhode Island. The primary objective of this unit was to determine what impact specific Navy decisions and actions had or would have on specific components of the health system within the state. Naval operations were not completely consolidated in any single part of the State. For example, there were Naval activities in all of the following Rhode Island locations: Newport, Quonset, Davisville, Charlestown, and Bristol. In addition, Navy military personnel, retirees, and civilian employees resided throughout the entire state. Thus, the primary work objective had a statewide focus, but emphasis was on the effects of the closing of Naval installations.

METHODS

All of the following means were employed in an attempt to accomplish the stated primary research objective.

The first step in implementing the primary objective outlined above was to search the literature mainly via Medlars.⁴ The purpose of the search of the literature was to identify any similar health studies that had been previously conducted so that: 1) effective research methods could be identified and utilized, and 2) likely effects could be identified and then watched for locally. Unfortunately the approximately 200 citations received from Medlars did not yield any past studies which were similar in scope and circumstance to the Economic Transition Project's study. Thus, the Economic Transition Project's work appeared to represent a new field of research activity: a comprehensive, community health study following a major economic and medical care dislocation. However, the efforts of several investigators (Brenner, Cobb and Kasl), which were discovered in the course of this search of the literature, proved to be particularly relevant.^{5,6} While these materials did not represent

prototypes for the ETP, they did provide valuable epidemiologic information concerning the relationship between health and economic downturns.

The Rhode Island Health Science Education Council (RIHSEC) was responsible for two manpower analyses. First, RIHSEC conducted a questionnaire/interview survey of health facilities on Aquidneck Island and in the North Kingstown Service Area. The "North Kingstown Service Area" was defined by the Economic Transition Project as the two Hospital Service Areas which surround North Kingstown (i.e., Kent and South County Hospital Service Areas). Hospital Service Areas were determined empirically on the basis of patient origin information.⁷ The purpose of the RIHSEC survey was to measure the extent of lost manpower to civilian health service providers as a result of the Navy's SER. Second, RIHSEC inventoried selected health professions (including physicians) in the geographic study areas using all available sources of such information, mainly licensure files.

The core staff implemented a 14 per cent random sample survey of military retirees in Rhode Island (n=583). The mailed questionnaire was designed to measure the impact of SER on the health of retirees and their dependents. Also, the core staff interviewed providers, consumers, government officials, and community interest organizations in the two target areas in order to get various perceptions regarding SER and general community health issues. Finally, the core staff secured the addition of health related questions to a census survey of former Quonset Navy civilian employees (n = ca 4000). This mailed questionnaire survey was conducted by the Office of Manpower Affairs, State of Rhode Island. The purpose of the health related questions was to determine the impact of SER on the health of former civilian employees of the Navy.

FINDINGS

The core staff identified the following facts. In fiscal year 1972 there were over 120,000 ambulatory visits and close to 4,000 inpatient admissions at the Quonset Naval Hospital. The hospital terminated all inpatient services in June of 1973. Outpatient services continued until the hospital's complete shutdown in March of 1974. At the same time there are approximately 10,000 Navy retirees and dependents living on the west side of Narragansett Bay (2,700 Navy retirees and their 7,200 dependents) who were eligible for and did receive outpatient and inpatient medical services at Quonset

(Continued on Next Page)

Table 1
1972 and 1974 Division of CHAMPUS
Admissions in Rhode Island

Claimants	1972	1974
Active Duty Dependents	74%	57%
Retirees and Their Dependents	26%	43%

Table 2
Navy FEP Beneficiaries in
Rhode Island 1971, 1974

Navy Beneficiaries	1971	1974
Individual	1,024	570
Family	4,778	2,056
Total	5,802	2,626

Table 3
Bed Complement and Percent Occupancy
for Obstetrics and Pediatrics
at Naval Regional Medical Center and
Newport Hospital
Hospitals Located in Newport

	Bed Compliment	Percent Occupancy
NRMC—1972		
Obstetrics	17	90.6
Pediatrics	17	32.4
Newport Hospital—1974		
Obstetrics	25	50.4
Pediatrics	24	37.2

Naval Hospital.⁸

Since the closing of the Quonset Naval Hospital, the percentage of CHAMPUS* utilizers in Rhode Island who are retirees has grown significantly⁹ (See Table 1).

At the same time, it was noted that total CHAMPUS expenditures in Rhode Island had not increased since SER.

As a result of SER there has been a dramatic decrease in the number of FEP (The Federal Employees Health Benefits Program) claims in Rhode Island¹⁰ (See Table 2).

Due to the lack of staff, the Naval Regional Medical Center at Newport has cut back on certain services (e.g., gynecological, orthopedic, psychiatric), bed capacity, and clinic hours.

The core staff observed that the Naval Regional Medical Center (NRMC) and the Newport Hospital, which are located near to each other in Newport, both have low occupancy rates for pediatrics and that the Newport Hospital has a low occupancy rate for obstetrics according to the most recent annual statistics available^{11, 12} (See table 3).

The RIHSEC manpower studies resulted in the following conclusions.¹³ A substantial number (173) of health professionals emigrated from the state as a direct consequence of the closing of Navy bases at Newport and Quonset in 1973 and 1974. How-

*Civilian Health and Medical Program of the Uniformed Services.

ever, it was found that this emigration of health professionals had no serious impact on the employers or health care providers. The lack of any serious manpower impact despite the relatively large emigration was probably due to the generally favorable health manpower status of Rhode Island and the fact that the faltering economy was creating a buyer's labor market. The one major negative finding produced by the RIHSEC manpower studies was that there is a serious deficiency of primary care physicians in the affected areas. In this regard the RIHSEC report stated that the presence of moonlighting Navy physicians enabled the Newport and Quonset areas to buy some time, but now a concerted effort is needed to meet a more desirable supply of physicians.

The mailed questionnaire sample survey of military retirees conducted by the core staff produced a 69 per cent response rate within the allotted time. This high response probably reflects the high level of interest in health issues among Navy retirees. Through the survey instrument the Navy retirees communicated the following attitudes and feelings: a) unhappiness with the fluctuation of services at the Navy Regional Medical Center, b) concern about the complexities and cost of CHAMPUS, c) irritation with regard to the tolls and distance to NRMC in Newport, d) disillusionment in the wake of the Navy's "broken promise" with regard to medical care. Some selected quantitative results of the military retiree survey can be found in Tables 4-7.

Table 4
Military Retiree Satisfaction With
Navy Medical Care After the Shore
Establishment Realignment Program

Satisfaction	Percent
Much Improved	1.5
Improved	4.5
Remained the Same	36.6
Declined	22.0
Severely Declined	22.0
No Response	13.4

Table 5
Distance to Navy Medical Care
for Military Retirees Since SER

Travel	Percent
Travel farther	34.3
Do not travel farther	44.7
No Response	21.0

Table 6
Military Retiree Use of CHAMPUS
(Civilian Health and Medical Program
of the Uniformed Services)

Use	Percent
Use CHAMPUS	34.6
Do not use CHAMPUS	58.8
No Response	6.5

Table 7	
Emotional Impact of SER on Military Retirees	Percent
Stress Experienced	34.3
Not Experienced	59.1
No Response	6.6

Table 8					
Suicide Rate in Rhode Island: 1973-1974					
	1973		1974		Percent Change
	No.	Rate	No.	Rate	
Suicide	81	8.3	99	10.5	+26.5

The census survey of former Quonset Navy civilian employees conducted by the Office of Manpower Affairs yielded only a 28.7 per cent response rate (1,175 responses out of 4,100 questionnaires mailed out) by the ETP close-out date. Therefore, due to the large potential bias associated with a low response rate, inferences or generalizations based on this survey should be made with extreme caution. With this important caveat in mind, it can be reported that most of the survey respondents: 1) currently had health insurance coverage (91.6 per cent), 2) were presently employed or retired (75.8 per cent), but 3) had experienced new personal or family emotional stress as a result of the Navy withdrawal (53.6 per cent).

Finally, core staff field interviews indicated increasing mental health problems in the target areas as a result of SER and the general economic slump which followed after SER. Health providers in the target areas indicated that they were observing increased personal and family tension and increased demand for mental health services. Along the same lines, it was noted that in 1974 there was a statistically significant increase in the suicide rate in Rhode Island.¹⁴ In fact, the 1974 suicide rate (10.5/100,000) was the highest rate in the last 30 years in Rhode Island, putting suicide among the ten principal causes of death. (See Table 8.)

DISCUSSION

All of the research aimed at assessing the direct health systems impacts of the Navy's withdrawal from Rhode Island leads to one unmistakable conclusion: the military retirees and their dependents in Rhode Island are the most adversely affected group. Due to the somewhat self-contained nature of the Navy medical service system, Rhode Island citizens in general were not affected by SER from a medical service perspective. Most former Navy civilian employees appear to have found new jobs, and appear to have maintained some form of health insurance. Rhode Island civilian health service providers, especially in the target areas, did experience some inconveniences due to the exodus of Navy-connected health manpower. However, these health

manpower losses to the civilian health sector appear to have been rapidly replaced.

The military retirees and their dependents in Rhode Island are bearing the brunt of the health service effects of SER. Navy medical services in Rhode Island are now less available and less dependable. They are also less accessible. Thus, military retirees and their dependents in Rhode Island are forced to delay or forego Navy medical care, or attempt to utilize civilian health services through CHAMPUS. Use of CHAMPUS is not a very attractive alternative for military retirees and their dependents because it is more complicated and more expensive. Military retirees in the State feel betrayed by the Navy as far as medical services are concerned.

The other major health system impact of SER was in terms of increased personal and family stress. The loss of employment, or the threat of loss of employment, as a result of SER caused emotional tension for individuals (and their families) employed directly by the Navy or by Navy-dependent businesses. This stress appears to have exacerbated mental health and alcohol abuse problems in the State.

In addition to its primary objective (i.e., to assess Navy health impacts), the ETP also set a secondary objective for itself which was to conduct comprehensive community health planning studies for the two geographic target areas (i.e., Aquidneck Island and North Kingstown). The methods, results, and conclusions related to this objective are detailed in the ETP's final report.¹⁵ Rhode Island Health Services Research Inc. (SEARCH) and Peat, Marwick, Mitchell & Company were retained as technical consultants. Also, community advisory groups were established in the three most affected hospital service areas: Kent, South County, and Newport. The work of these groups and of the core staff led to the identification of the following common themes for the two target areas: 1) ineffective health education; 2) lack of health service information, referral, and linkage; 3) want of transportation for the poor, elderly, and chronically ill; 4) short supply of primary care; 5) disproportionately great health service problems of all kinds for the poor and elderly; 6) growing concern about mental illness and alcoholism; 7) inefficient distribution and utilization of hospital inpatient services; and 8) citizen ignorance of the prepaid group practice concept.

(Continued on Page 509)

When Medical Technology Fails

To Allay The Anxieties Of The Living And End Life In Dignity Should Be Our Goals

By Susan Trachtenberg

*To everything there is a season, and
a time to every purpose under the heaven:
a time to be born and a time to die.*

ECCLESIASTES 3:1

This is a sentiment which, though true, is not accepted in our present day death-denying society. Talk of death is considered not merely morbid, but taboo. We fear and deny death's reality. We use euphemisms when referring to death, and we have developed the fine art of making the dead appear as though they were merely asleep. We go to all costs to avoid speculating on death. Yet, this is exactly what we need most urgently to do. Ours is an age that has been witness to violent death in war and to greater numbers of deaths through accidents than ever before. If we have no acceptable conception of death then it is bound to cause us emotional trauma.

How can the individual be helped — what happens to the man who lives in a society determined to ignore or avoid this fundamental aspect of living? Why is there an ever-increasing anxiety regarding death? In view of the advances which have been made in science and technology, how can we assure ourselves that medicine will maintain its humanitarian status rather than metamorphose into a depersonalized science aimed at sustaining life rather than decreasing suffering? What is the

SUSAN TRACHTENBERG, *Member of the
Brown University Class of 1978.*

This essay was written as a requirement for the laboratory portion of Biology I. The encouragement of W. C. Quevedo, Jr., Ph.D. and G. F. Meissner, M. D., is gratefully acknowledged.

ultimate effect on the individual when he lives in a society which all too often overemphasizes "book-learning" and all but disregards tact, sensitivity, and good taste in the management of medical problems? When we are able equally to incorporate the new scientific and medical advances of our day, with an emphasis on human relations, then a big step will indeed have been made.

Science and technology have contributed in large part to society's defensiveness regarding death; by adding to society's fear of being destroyed they have added to society's fear of death. Advances in science and technology are responsible for the production of agents of mass destruction.

Destruction can strike out of the blue skies and destroy thousands like the bomb at Hiroshima; it may come in the form of gasses or other means of chemical warfare — invisible, crippling, killing. It is no longer the man who fights for his rights, his convictions, or the safety or honor of his family, it is the nation including its women and children who are in the war, affected directly or indirectly without a chance of survival.¹

This being the case, however, man attempts more strenuously than ever to defend himself; yet, he can not maintain this denial of death indefinitely — instead, he tries to master it. Doctor Kubler-Ross, a Swiss-born psychiatrist known for her work in the field of thanatology, suggests that wars are merely representative of man's need to face death, to beat it, to come out alive; she feels them to be strange manifestations of man's inability to accept his own mortality.

While every person tries to avoid the uncomfortable issue, eventually one must come to grips with this most elemental reality. True, death is not easy to examine because of its elusive quality. What actually is death? A state? An experience? A condition of nature? An act? Transcendence from one realm to another? Biology gives us a sophisticated understanding of what happens to the body to make it die, as well as what happens in the event of death itself. However, what can a biologist use besides his conception of life, in order to give us an account of the processes of death? The only way to come to terms with this fundamental aspect of life is to be able to conceive of one's own death. It seems to me that this is a subject which merits reflection not only because of the preparation it gives us for the irreplaceable losses death wreaks upon our lives, but also because affirming our own mortality may highlight a sharper sense of freedom and a heightened awareness of the uniqueness of each individual. If we focus on death's utter void, we also magnify the vitality that circumscribes it. Obviously, this must be done by each individual — it does not work on a mass scale. If, however, we can begin to do this, many changes could be affected — changes beneficial to patients, to families, and, ultimately, maybe even to the nation itself.

Presently, many young doctors find themselves in the difficult position of knowing how to prolong life, but being unable to provide their patients with the emotional support which they so desperately need. Doctors have been grossly under-educated in terms of training or discussion on the definition of "life." In many ways death today is more horrible than ever before—it is more lonely, more dehumanized, more mechanical. Nowadays, people rarely die at home, surrounded by the people they love, but rather are whisked away, destined to die in the sterile, impersonal environment characteristic of most hospitals. All too often the human being gets lost in a preoccupation with pulse, heart rate, electrocardiogram, and pulmonary functions. Perhaps the reason for the depersonalization in the treatment of the dying patient can be attributed to the defensiveness of the staff; perhaps this is their means of dealing with and repressing the anxieties which come up in the treatment of someone who is going to die.

Is our concentration on equipment, on blood pressure, our desperate attempt to deny the impending death which is so frightening and

*discomforting to us that we displace all our knowledge onto machines, since they are less close to us than the suffering face of another human being which would remind us once more of our lack of omnipotence, our own limits and failures, and last but not least, perhaps our own mortality?*¹

Rather than having specialists for the dying, we must attempt to educate our hospital personnel to be able to deal successfully with the difficulties of dealing with terminally ill patients.

*Perhaps what I am saying is that we can help them die by trying to help them live, rather than vegetate in an inhuman manner.*¹

Another problem common to the doctors is that of confronting a patient with the diagnosis of a malignant disease. Some doctors prefer to inform the relatives but not the patients themselves, while others are sensitive to the needs of their patients and are able realistically to describe the true situation while allowing them at the same time to maintain some degree of hope. Doctor Ross maintains that this is very important; she says that the physician must be truthful, yet he must not close all doors to the possibility of survival. He must make the patient realize that everything possible will be done, always. If a physician is successful in this, the patient will be able to trust his honesty and will not need to be afraid of deceit, isolation, or rejection. A decisive factor in determining whether a doctor will be able to accomplish this is his own attitude and ability to deal with incurable illness and death. If it presents the doctor with a problem, chances are that he will be incapable of calmly helping a patient to deal with his impending death.

*...those doctors who need denial themselves will find it in their patients and...those who can talk about the terminal illness will find their patients better able to face and acknowledge it. The need of denial is in direct proportion with the doctor's need for denial.*¹

Death may shock us by bringing to mind our own mortality, but bereavement embarrasses us by pointing out how helpless we are in the face of grief. Research scientists studying personality as it relates to death have come to realize that this is not a subject of mere casual interest. Research in psychosomatic medicine indicates that poorly managed grief (often due to unresolved guilt or anger) manifests itself in physical illness. The harmful

(Continued on Page 511)

JOHNNY CAN'T WRITE

Recent press reports indicate that not only can't Johnny read, he also can't write! And incidentally, he also can't add. While the significance of deteriorating Scholastic Aptitude Test scores in these fundamental disciplines may be subject to varied professional interpretations, the decay of spoken and written language in this country is really quite obvious to the casual observer. The awkward inarticulate speech of the typical teenager is an acute embarrassment. Indifference to language and ineptitude in writing are a continuing source of poignant discomfort for the Editor.

There appear to be a number of converging reasons for this unfortunate situation. The late John Dewey's *laissez faire* pedagogy coincides strangely with the "do your own thing" philosophy of the modern existentialist. Johnny couldn't read because he wasn't taught phonetics. Johnny's kid brother can't write because he isn't taught sentence structure. The simple declarative sentence is as strange to him as the declension of a Syriac noun.

A further source of weakness is the general discrediting of the teaching of foreign languages. The study and understanding of foreign languages imposes upon the student the need for understanding basic sentence structure. Colleges have generally weakened foreign language requirements to a minimum. It can be stated as a virtual truism that two years' study of any language, as offered in the typical high school curriculum, is a waste of time.

A more serious deficiency is the downgrading of the Classics. Classical courses are looked upon with disdain by the professional educationists. Our local Classical High School, still a first rate institution in its insistence on excellence, now however requires only two years of Latin for completion of the classical course! The old fashioned and quaint concept that the study of Latin taught discipline,

logical thinking, and the basics of grammar may yet be given credence again. There is some evidence, according to the New York Times, that "The study of the ancient Greek and Roman classics, which many had feared would soon follow Sanskrit into academic obscurity, is staging a surprisingly vigorous comeback on many American campuses." We sincerely hope that this is a genuine change of heart and that the renaissance will seep down to the secondary school level. Professor John Workman of Brown University has observed that enrollment in his school in classical Greek and Latin has increased by 50 per cent during the past five years. He believes that much of the interest may represent the college students' rebellion against "packaged education in high schools," where such subjects ordinarily receive scant attention.

The traditional old-time doctor studied Latin as a prerequisite so that he could have a sound background in medical and botanical terminology and be able to write prescriptions in that arcane language. Incidentally, he usually wrote very well.

There is no doubt that in pedagogy as in dress styles and philosophies the pendulum swings widely and deliberately. Perhaps we shall once again see the day when solecisms, dangling participles, split infinitives, awkward sentences, misspellings, tired old cliches, inelegant slang, and just downright poor writing will no longer be a scourge in this realm. May those much abused phrases "this point in time," "parameters," "a job well done," "in this area," "methodology," and "hopefully" be banned from polite speech and good writing.

We look forward to the time when the teaching of grammar, writing, foreign languages, and the Classics will be considered not only respectable, but a basic necessity.



Editor's Mailbox

PROTEST TO RIGHA

TO THE EDITOR:

I want to lodge a protest in the strongest terms against the socialist intrusion of the federal bureaucracy in its massive financial support of the Rhode Island Group Health Association (RIGHA).

RIGHA has recently been funded to the extent of a \$2 million dollar five year loan and an outright \$400,000. grant from the government. They are an inefficient group at best and practice a less than adequate brand of medicine — a no choice type of medicine. Yet they are taking part along with their sponsor, Senator Claiborne Pell, in dismantling the greatest system of medicine in the world.

My partner and I are radiologists. We recently borrowed \$200,000 to purchase equipment and to open our office in North Providence (Wellesley X-Ray Associates). No one, including the federal government, gave us any outright grant. We had to mortgage away our families' security, and we work eleven hours a day six days a week trying to pay our mortgage and electric bill.

How can we compete when they give our tax money to our competitors, who in turn use it to attempt to destroy our practice? Fellow Medical Society Members, there is no competing against this form of discriminatory federal action, for we have to earn our money while they have it given to them. They can afford to continue to be inefficient; we must pay for our efficiency.

This might all be fine and fair and justified if the government had already nationalized medicine in this country. However, that is not yet the case, and since the United States still retains more than the vestiges of the free enterprise system and democracy rather than outright socialism, I will strongly protest through every channel open to me.

How strongly will WE protest? Why shouldn't our protest be more than vocal? It is not merely a question of whether we should avail ourselves of the courts to attempt to stop them. IT IS SIMPLY A MATTER OF SURVIVAL THAT WE DO SO.

MICHAEL A. DeLUCA, M.D.

CORONARY SYNDROME

To the Editor:

The prime cause of the coronary syndrome is overweight. Over 75 per cent of Americans, including the doctors, are overweight. If you have a heart problem and are overweight, don't consult an overweight doctor, because he often has a guilt complex and will soft-pedal your weight problem.

While I was serving my two-year rotating internship at Rhode Island Hospital in 1921-23, I had the good fortune to have Doctor Frank T. Fulton as chief of medicine for a period of four months. Doctor Fulton was the first cardiologist in the state of Rhode Island, and he introduced the first EKG machine at the Rhode Island Hospital. It was nearly the size of an antique family house organ and was imported from England.

Doctor Fulton's gospel: Get the heart patient's weight down to normal or even five pounds underweight and forbid coffee, tea, alcohol, and tobacco. For pain, nitroglycerine gr 1/100 under the tongue every five minutes till relieved — 3 dose limit; or subsequently if necessary morphine gr 1/4 with atropine gr 1/150 under the tongue every hour till relieved — 3 dose limit. Also, prescribe a "tonic" dose of digitalis gr 1 1/2 daily except Wednesday and Sunday, and nature will do wonders. For 52 years I have prescribed the Fulton treatment for my patients and it works!

Recently the news media reported an interesting heart case: "Doctor Joe Early (Bobby Troup) of TV's 'Emergency': Why I refused to have Heart Surgery." Two years ago, Bobby Troup, then age 54, felt a sudden tightening in his chest and the doctor reported 90 per cent blockage in one cardiac artery and an 85 per cent blockage in another and recommended heart surgery. Bobby sought the opinion of two other specialists and they thought his problem could be controlled by medicine and weight loss. Troup stated: "They put me on pills, and I also went on a nonfat low-cholesterol diet. The medicine didn't remove the blockage in my arteries, but collateral blood vessels developed around the blockage. In other words, nature made the bypass itself! Today, I feel great and my EKG is normal!"

E. A. BOWEN, M.D.

(Continued on next page)

"THE QUINLAN QUAGMIRE"

New York Times (November 11, 1975)

To the Editor:

When Judge Robert Muir, Jr. of the New Jersey Superior Court handed down his written verdict regarding the Karen Quinlan case, it apparently came as no surprise to the legal profession. He ruled that Karen Quinlan could not be removed from the respirator that apparently supported life. The key concept in his decision was that the machinery did indeed *support life*. Therefore, since it is clearly against the law to commit murder and since all legal precedent permitted him no choice or flexibility, his decision was foreseeable and relentless. The essential problem here is to gain a clearer concept of what life is and what death might be. It is only by constructing non-ambiguous terms that the problem can be approached so that a workable model can be constructed. There is a certain ambiguity with phrases that describe "living vegetables" or "human vegetables." Clearly, our definition must separate these terms so that a person is either a human being or a vegetable; the two conditions cannot co-exist. Attempts at crystallizing these terms have been made, and a certain amount of progress has been recorded so that society's thinking may better grapple with the concepts and thus secure a clearer understanding.

Traditionally it was felt that death had occurred when the heart and lungs ceased to function. This was a reasonable yardstick in the days before medical technology had reached the state where death could be masked by artificial control of the heart and lungs. We now have machinery that can stimulate respiration and support circulation almost indefinitely. More recently the concept of brain death has been elucidated. The feeling that the brain more nearly represented the human being than did the heart or lungs has brought this shift in emphasis. It is now felt by many that, if the brain is dead, then the person as we know him with his individual makeup, memory, thinking, and interpersonal relationships is indeed dead. This concept appears to be sensible among thinking men and women. It is an eerie thought to equate the sanctity of life with the fact that a pulp-like mass of tissue has the capability to emit electrical impulses. The electroencephalogram machine can very cunningly and accurately determine whether or not the

brain is dead by recording any residual electrical activity. We have a method that informs us of total brain viability, thus life. In Karen Quinlan's case it was determined without doubt that the brain emitted electrical impulses, and therefore she was alive, notwithstanding a judgment regarding the quality of her life. With these legal facts Judge Muir was bound by statutory law to say that she could not be "killed" by withdrawing life support systems. The brain death yardstick as measured against life fails only in that it has not gone far enough in recognizing that the brain has different components and that they do not all cease to function at once.

Our present brain represents millions of years of evolutionary trial and error, its unconscious reflex patterns being deeply embedded in the brain stem which originated over 20 million years ago with our reptilian ancestors during Mesozoic times. The mid-brain, which mediates our limbic system or our emotional lives, fears and passions, can be viewed as the mammalian brain, having its greatest development in the Cenozoic period during the last 7 million years. The part of the brain that is uniquely human in hominid architecture and function is the cortex. This forepart of the brain and its more recent covering, the neo-cortex or new cortex with its delightfully convoluted pattern, is the portion that gives us our human status, and is concerned with memory, association patterns, and cognition. The human personality and human life are the by-products of this part of the brain, the cortex or the neo-pallium. The vegetative or biological functions are maintained essentially by the brain stem. If in our definition of brain death or brain life we could tie sentient life or recognizable human life to the cortex and clearly distinguish vegetative life as a function of the electrical output from the brain stem, we could clearly say that Karen Quinlan is dead in spite of the electrical patterns as evidenced by the electroencephalogram, and withdraw all artificial support systems.

It is our failure to distinguish heretofore between the different parts of the brain and their functions that has heightened this moral dilemma and obscured the fact that Karen Quinlan is indeed dead, because her cortex is dead. Cellular activity with

electrical output from the brain stem represents the same type of vegetative life that could be assigned to hair cells or heart cells that might be maintained artificially.

The attempt must be made to illuminate these bioethical problems, solutions must be sought, ethical traps avoided, and society and its need for usable organs considered. However, the ultimate response must be mediated by the medical profession, who take their orientation from the needs of the patient and not from the needs of the state, the needs of society, or the needs of the family. Trust and trustworthiness are the cornerstones of the doctor-patient relationship and must not be disturbed, lest decisions of such a critical nature, affecting us as individual citizens and human beings, will be made on the basis of pragmatism by governmental fiat.

MICHAEL E. SCALA, M.D.

Adjunct Professor of Anthropology, Rhode Island College; Clinical Instructor of Orthopedics, Brown University Medical School.



LABORATORY TESTS OF THYROID FUNCTION

(Continued from Page 499)

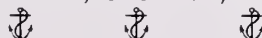
ally be low. Clinically, a rough, dry, scaling, thickened skin and elevated serum cholesterol will suggest primary hypothyroidism; a fine, thin, "albaster" skin and a normal or low serum cholesterol will suggest hypopituitary (or hypothalamic) hypothyroidism. Serum TSH level or TSH administration will indicate whether the pathology is in the thyroid itself (increased TSH level and failure of TSH to increase uptake) or is secondary to pituitary or hypothalamic malfunction (decreased TSH level or increase of I-131 uptake following TSH administration). Administration of TRH will then differentiate whether the defect is in the hypothalamus (correction of the lowered I-131 uptake) or is due to pituitary failure to respond to TRH. Where the I-131 uptake is normal or elevated in a patient suspected of hypothyroidism, the hypothyroidism may be due to a failure to convert incorporated iodide to hormone. A thiocyanate (SCN) or perchlorate (C1O₄) discharge test is then indicated. After the I-131 uptake has reached its peak, either SCN or C1O₄ ion is given by mouth and the radioactive count is repeated in 1-2 hours. SCN or C1O₄ discharges radioactive iodide not yet con-

verted to organic iodine or hormone. In normal or hyperthyroid subjects, incorporated iodide is converted so rapidly that it is not discharged by SCN or C1O₄. Any defect in conversion of iodide to MIT, DIT, T-3, or T-4 leads to a prompt discharge of the unconverted iodide by SCN or C1O₄. A significant decrease (e.g., greater than 10 per cent) of the radioactive content of the thyroid gland following administration of thiocyanate or perchlorate will indicate a pathogenetic mechanism for compensatory thyromegaly or, if compensatory function is inadequate, explain the resultant hypothyroidism.

In this review of laboratory testing it need hardly be emphasized that the primary diagnostic tools remain a careful history and physical examination. Alerted by his findings, the knowledgeable physician will then select appropriate laboratory tests to help provide him with a rational basis for diagnosis and therapy for his patient.

REFERENCES

- ¹Hamolsky MW: Measurement of thyroid function: Physiology and biochemistry of the thyroid gland. In *Nuclear Medicine* by W. H. Bland, Second Edition. New York, McGraw-Hill, 1971
- ²Werner SC, Ingbar SH, editors: *The Thyroid*. Third Edition. New York, Harper and Row, 1971
- ³Sterling K: *Diagnosis and Treatment of Thyroid Diseases*. Cleveland, CRC Press, 1975



COMMUNITY HEALTH PLANNING IN RHODE ISLAND FOLLOWING THE NAVY'S WITHDRAWAL

(Continued from Page 503)

REFERENCES

- ¹Governor's Office for Manpower Affairs: *Comprehensive Manpower Plan, Fiscal Year 1973-74*. Providence, State of R.I., 1974. P. 2
- ²Governor's Office: *Reuse and Development of United States Surplus Military Lands in Rhode Island: General Plan*. Providence, State of R.I., 1974. P. 5
- ³Economic Renewal Coordinating Center; *Assessment of the Economic and Social Impacts of the Rhode Island Navy Base Reductions*. Providence, Governor's Office, State of R.I., 1974
- ⁴Medical Literature Analysis and Retrieval System, National Library of Medicine, Bethesda, Maryland
- ⁵Brenner MH: Fetal, infant, and maternal mortality during periods of economic instability. *Int J Health Serv* 3:145-59, Spring 73. And Brenner MH: Economic changes and heart disease mortality. *Am J Public Health* 61:606-11, Mar 71
- ⁶Cobb S and Kasl SV: *Some Medical Aspects of Unemployment*, Institute for Social Research, The University of Michigan, Ann Arbor, May 71
- ⁷Patient origin of general hospital discharges. *R.I. Dept. Health Newsletter*, 15 Nov 74

(Continued on Next Page)

COMMUNITY HEALTH PLANNING IN RHODE ISLAND FOLLOWING THE NAVY'S WITHDRAWAL

(Continued from Page 509)

- ⁸Quonset Hospital to close March 30. Providence J, 31 Jan 74
- ⁹Statistics supplied by Blue Cross of Rhode Island
- ¹⁰Ibid
- ¹¹Health Planning Council, Inc.: **Hospital Utilization in Rhode Island, 1972.** Providence, Health Planning Council, Inc., 1973
- ¹²Health Planning Council, Inc.: **Hospital Utilization in Rhode Island, 1974.** Providence, Health Planning Council, Inc., 1975
- ¹³Rhode Island Health Science Education Council: The effect of the closing of naval installations at Newport and Quonset on the health manpower supply in the surrounding areas. Rhode Island Health Science Education Council, Cranston, May 1975
- ¹⁴Rhode Island Department of Health: **Provisional Vital Statistics, 1974.** Providence, State of R.I. and Providence Plantations, 1974
- ¹⁵Rhode Island Department of Health: **Community Health Planning in Rhode Island During a Period of Economic Transition.** Providence, Rhode Island Department of Health, 1975



Are You Moving?

If you're moving soon, please let us know
at least six weeks before you move.

Send change of address to
RHODE ISLAND MEDICAL JOURNAL
106 Francis Street
Providence, RI 02903

Name

Old Address

Street

City State Zip

New Address

Street

City State Zip

IMPORTANT INFORMATION: This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE

Searle & Co.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

455

When diarrhea
has him reeling...



Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and

fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil[®] TABLETS LIQUID
holds the line.

Each tablet and each 5 ml of liquid contain: diphenoxylate hydrochloride 2.5 mg (Warning: May be habit forming), atropine sulfate 0.025 mg

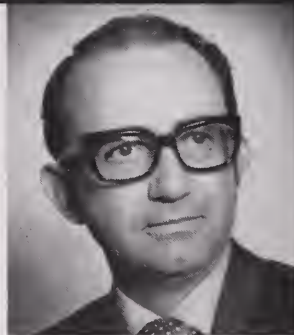
Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association



The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is

no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a pa-

tient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert


The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005





Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

- Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
- Can relieve nausea and vomiting often associated with vertigo.*
- Usual adult dosage for Antivert/25 for vertigo*: one tablet t.i.d.
- Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
- Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert[®]/25 (meclizine HCl) 25 mg. Tablets for vertigo*

WHEN MEDICAL TECHNOLOGY FAILS

(Continued from Page 505)

effects of inadequate grief response are evident in cases where life loses its meaning, or maladaptive forms of behavior develop, or both. Nor can the fact that bereavement is associated with an increased risk of mortality be ignored.* Clearly we must learn how to help people to integrate their loss without developing either physical or emotional disorders. To neglect to do this is unnecessary and inexcusable. If we are capable of predicting patterns of development from the time of birth until death, and if we are able to distinguish between normal and abnormal behavior for specific periods in human growth, we certainly can use similar methods to get an understanding of human reactions to life's finitude. Above all, grief and bereavement are human conditions — they are foreseeable, normal, understandable. At the present time we are in desperate need of research; our reactions to bereaved people appear to be more well-intentioned than they are well-informed.

To be born mortal is, by definition, to be destined to die. There must, therefore, be a way of facing rationally this most elemental adjunct to living — dying: a way beyond the extremes of blind faith or complete escapism, a way to help human beings to end their lives in dignity, to help their survivors to go on living, uncrippled, able to accept their healing sorrow.

*Kraus and Lilienfeld (1959) found that the death rate was much greater among widowed individuals than among young married couples. Their data were based on a 1950 census of all deaths in the Continental United States between 1949-1951⁴

REFERENCES

¹Kubler-Ross E: *On Death and Dying*. New York, The Macmillan Company, 1969. Pp. 9, 12, 21, 32

²Kubler-Ross E: *Questions and Answers on Death and Dying*. New York, The Macmillan Company, 1974

³Kutscher LG, editor: *Bereavement and Allied Fields*. New York, Health Sciences Publishing Co., Inc., 1971

⁴Kraus AS, Lilienfeld AM: Some epidemiologic aspects of the high mortality rate in the young widowed group. *J Chronic Dis* 10:207-17, Sep 59



ONE SENTENCE ESSAY

No problem is so big and complicated that it can't be run away from.

... CHARLIE BROWN

Peripatetics

JOHN A. ROQUE of North Kingstown has been installed as president of the St. Joseph's Hospital medical staff. He succeeds ANTHONY F. MERLINO of North Providence.

Others installed at the Staff's annual meeting in October were ERMINO R. CARDI, president-elect; JAMES J. SHERIDAN, secretary; R. ROBERT BARONE, treasurer; and HENRY J. ROBIDOUX, JR., and KENNETH G. KNOWLES, representative-at-large.

* * *

ARTHUR I. GELTZER is newly appointed to the St. Joseph's Hospital staff in the areas of Surgery and Ophthalmology.

* * *

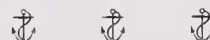
MICHAEL E. SCALA has been reappointed in an active teaching capacity as adjunct professor of Anthropology at Rhode Island College for 1976.

He will be presenting an instructional course at the annual American Academy of Orthopedic Surgeons meeting to be held in New Orleans this coming February entitled "Humanism, Bio-Ethics and Moral Dilemmas."

* * *

EDWARD CARDILLO, of Providence, was elected President of the Medical Staff at Women and Infants Hospital of Rhode Island. He succeeds SUMNER I. RAPHAEL as president.

Also elected officers of the Medical Staff were MARSHALL A. TAYLOR, vice-president; J. DOUGLAS NISBET, treasurer; and JOSEPH D. DiZOGGIO, secretary. Elected members of the Executive Committee were: HOWARD A. HALL, ANTHONY MANOCCHIO, for a three year term; BENJAMIN VOGEL, for a two year term; and NORMAND E. GAUVIN, for a one year term.



MEDICAL MALPRACTICE INSURANCE AND UMBRELLA LIABILITY INSURANCE

For No Obligation Quotations or Assistance
CALL 751-3312

LEN DiPRETE

DUNCAN B. CAMPBELL CO.

9 So. Angell Street

Wayland Square, Providence, R.I.

Happy to make Home or Office Visits or give
Phone quotations

Physicians Seeking Opportunities In Rhode Island

Raymond A. Maddocks, M.D.
54 North Prospect Street
Burlington, VT 05401
Specialty: Urology

* * *

Thomas Howard Etkin, M.D.
175 Lloyd Avenue
Providence, RI 02906
Specialty: Pediatrics

* * *

William Doscher, M.D.
2500 Johnson Avenue
Riverside, NY 10463
Specialty: Vascular Surgery

* * *

Raymond K. Chan, M.D.
2911 Dover Lane
Apt. No. 202
Falls Church, VA 22042
Specialty: Pediatrics

* * *

Andrew Larkin, M.D.
4535 Larchwood Avenue
Philadelphia, PA 19143
Specialty: Primary Care

* * *

Thomas P. McCormack, M.D.
33 Highland Street
Apt. No. 5-F
New Britain, CT 06052
Specialty: Obstetrics and Gynecology

* * *

Kwang Hoon Kim, M.D.
1935-17A Eastchester Road
Bronx, NY 10461
Specialty: Urology

* * *

Ahmad Taleghany, M.D.
10 Waterside Plaza
New York, NY 10010
Specialty: Internal Medicine

* * *

M. P. Singh, M.D.
1623 Fifteenth Avenue
Kenosha, WI 53140
Specialty: Neurology

Luis A. Barranco, M.D.
Edificio Romero
Calle Jobes Esq. America Capo
Ponce, Puerto Rico 00731
Specialty: Medicine and Surgery

* * *

Alfredo F. Xavier, M.D.
Henry Ford Hospital
2799 West Grand Blvd.
Detroit, MI 48202
Specialty: General Surgery

* * *

Lauchlin McKay, M.D.
McKeesport Hospital
1500 Fifth Avenue
McKeesport, PA 15132
Specialty: Family Practice

* * *

Spencer G. Weig, M.D.
Boston Floating Hospital
171 Harrison Avenue
Boston, MA 02111
Specialty: Pediatrics

* * *

Alexander Philips, M.D.
Worcester City Hospital
26 Queen Street
Worcester, MA 01610
Specialty: General Surgery

* * *

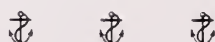
Kirit D. Trivedi, M.D.
Chief Surgical Resident
The St. Vincent Hospital
Worcester, MA 01610
Specialty: General Surgery

* * *

Ming-Che Tsai, M.D.
89-29 134th Street
Richmond Hill, NY 11418
Specialty: Internal Medicine and Cardiology

* * *

Robert S. Katz, M.D.
102 West 39th Street
Apt. No. 3-A
Baltimore, MD 21210
Specialty: Internist-Rheumatologist



THE AMERICAN RETIRED PHYSICIANS ASSOCIATION

American physicians who have retired from practice or are planning for retirement have formed a new society to serve their needs and interests — The American Retired Physicians Association.

The association includes retired and semi-retired physicians and their spouses and widows, age 55 and over. ARPA is incorporated in the State of Illinois as a not-for-profit group. Executive Director is Ralph Creer, former director of the American Medical Association's Department of Scientific Assembly.

ARPA will emphasize projects and areas in which retired physicians may continue to be active in community affairs through educational programs in schools, hospitals and other community institutions.

It also will offer services of direct benefit to the membership, including group tours for travel, insurance, special plans for purchase of major consumer items, and other services.

ARPA will begin publication early in 1976 of a membership newsletter. It will feature news of opportunities to keep active and involved in medical and related projects, proposed group tours, a financial column aimed at physicians considering retirement as well as those already retired, disposition of a practice, wills and investments.

The newsletter will include a section of latest developments in medicine and surgery, presented in brief abstract form for those who wish to keep abreast of their profession but who no longer are interested in intensive study.

ARPA has been awarded a grant from AMA to aid in the association's development. Dues will be \$10 per year for physicians and their spouse or their widow. Interested physicians may request application blank or additional information from: American Retired Physicians Association, Suite 906, 400 N. Michigan Avenue, Chicago 60611, (312) 644-3092.

11th Annual ASCMS Assembly

Drs. Michael DeBakey, Eliot Corday, John Laragh, R. Lee Clark, George Crile, Jr., Louis Weinstein and Owen Wagansteen will head a faculty of nearly 100 leaders of American medicine at the 1976 American Society of Contemporary Medicine and Surgery Scientific Assembly (Feb. 29-Mar. 5, Americana Hotel, Bal Harbour, Fla.)

Seminars include: Cancer, Cardiovascular Disease, Hypertension, Alimentation, Infectious Disease, Gastroenterology, Pulmonary Disease and numerous sections on Special Medicine and Special Surgery. CME Accreditation: 40 hours Category 1 AMA; 30 elective hours AAFP.

For information and program: Dr. John Bellows, ASCMS Director, 30 North Michigan Avenue, Chicago, IL. 60602.

E. P. ANTHONY, INC. *Druggists*

WILLBUR E. JOHNSTON, Phar. D.
RAYMOND E. JOHNSTON, B.S.

178 ANGELL STREET
PROVIDENCE, R. I.
GAspee 1-2512

Pharmacy License No. 225

Curran & Burton

DIVISION OF TEXACO, INC.

1120 Eddy Street
Providence, Rhode Island
Hopkins 7-8050

Reports Of The House Of Delegates

A special meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Society Auditorium, Providence, on Friday, June 13, 1975. The meeting was called to order by Speaker of the House, Doctor Thomas F. Head, at 8:20 p.m. President Stephen J. Hoyer introduced Mr. Robert E. Liguori, Director of the Department of Business Regulation.

Mr. Liguori stated that the JUA was established as a temporary emergency regulation, effective June 16, 1975 at 12:01 a.m., and would be comprised of the insurance companies licensed to do business in Rhode Island who are writing personal liability insurance. A JUA board of directors will determine the insurance rates and report recommendations to Mr. Liguori by June 25. This rate structure will be self-supporting and both "occurrence" and "claims-made" policies will be written under the Joint Underwriting Authority. Mr. Liguori mentioned that the rates will go up the first year primarily because of a one-third surcharge on the first year premium which will be invested in a stabilization reserve fund.

Mr. Liguori reported further that the JUA was not a panacea for malpractice insurance ills but merely a temporary stop gap measure to provide a guaranteed insurance market for all Rhode Island physicians in Rhode Island and not just those in the higher risk categories. Lower risks must also be in the JUA for it to be a viable organization. An exclusive market will, in addition, enable Mr. Liguori and other officials to analyze Rhode Island data on their own for comparison with statistics offered by the insurance carriers.

Physicians will continue to go through their regular insurance agent for JUA coverage and applications will be available after the JUA Board of Directors has determined the rates on June 25. The Board will consist of eight insurance representatives and three medical representatives appointed by Mr. Liguori. The Director of the Department of

Business Regulation appointed Doctors H. Gerald Rock, Kenneth Liffmann, and Frank W. Sullivan to the JUA Board and mentioned that the Joint Underwriting Authority would remain in existence only until remedial legislation can be secured and arrangements can be worked out with a carrier or carriers to return to a voluntary market.

Following Mr. Liguori's presentation, Doctor Hoyer introduced Mr. Chester Dosdall from the Boston office of the St. Paul Fire and Marine Insurance Company. Mr. Dosdall had requested the opportunity to speak on the new "claims-made" policy as promulgated by his company and to answer questions from the House of Delegates. After the discussion of "claims-made," Speaker Head called the meeting to order at 10:20 p.m. for consideration of official business. President Hoyer presented the following resolution of commendation which was unanimously approved by the House:

Resolved, That the Rhode Island Medical Society publicly express its appreciation to Governor Noel for his outstanding leadership during this crisis, Lt. Governor Garrahy, all members of the Rhode Island General Assembly, Mr. Robert Liguori, Director of the Department of Business Regulation, Mr. Peter Mullaney, Insurance Commissioner, and all others who have worked so diligently and expeditiously on behalf of the people of Rhode Island to find a lasting solution to the malpractice insurance crisis; and be it further

Resolved, That a copy of this resolution be disseminated to all of the parties mentioned above in the first resolved.

The House of Delegates discussed a motion pertaining to an assessment of Rhode Island Medical Society members and took the following action:

Action: A motion was made, seconded, and voted to assess each member of the RIMS \$50 during 1975 primarily to provide funds for public relations efforts as deemed necessary by its officers to enlist public support for the passage of appropriate remedial legislation to alleviate the present malpractice insurance crisis, and any funds remaining from the assessment may be used as the treasurer deems advisable in the overall operation of the Rhode Island Medical Society.

ADJOURNMENT

The meeting was adjourned at 11:10 p.m.

FOR SALE

X-RAY DEVELOPING TANK

(10 + 10 Gallons)

With mixing valve, film drier (12 film capacity), and film hangers.

CALL

725-3632 or 725-3770

PERFORMANCE. IT'S A MATTER OF RECORD.

- an unsurpassed record validated in several thousand clinical papers
- rarely interferes with mental acuity
- wide margin of safety



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous

occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of child-bearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy. **Usual Daily Dosage:** Individualize for maximum beneficial effects. **Oral—Adults:** Mild and moderate anxiety and tension, 5 to 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* **Geriatric patients:** 5 mg *b.i.d.* to *q.i.d.* (See Precautions.) **Supplied:** Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRIUM®

chlordiazepoxide HCl/Roche
5mg, 10mg, 25mg capsules

**IN PAINFUL
ACUTE
CYSTITIS***

*nonobstructed;
due to susceptible
organisms



RELIEVE THE PAIN WHILE YOU ELIMINATE THE PATHOGENS.

FOR THE PAIN

- ☐ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

FOR THE PATHOGENS

- ☐ **Effective control of susceptible pathogens** such as *E. coli*, *Klebsiella-Aerobacter*, *Staph. au-*

reus, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

Appropriate antibacterial therapy: Up to 3 days therapy with Azo Gantrisin 4 to 6 tablets *Stat.*, then 2 tablets *q.i.d.*; then 11 days with Gantrisin (sulfisoxazole) may be considered.

AZO GANTRISIN®

(50 mg phenazopyridine HCl and 0.5 Gm sulfisoxazole)

Before prescribing, please consult complete product information, a summary of which follows.

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

Important Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia.

Allergic reactions: Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, periph-

eral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

RHODE ISLAND MEDICAL JOURNAL

Volume 58, 1975

Published for the Rhode Island Medical Society
Under Direction of Committee on Publications
106 Francis Street, Providence, Rhode Island 02903

S U B J E C T I N D E X

	Page		Page
ABUSED Children Act	474	CePHALOSPORINS	62
ACKNOWLEDGEMENT, Correction	141	CHASET, Nathan. President AUA	456
ADAMS, Levi (photo)	237	CHEMICAL Bleaching in U.S., 1811	439
ALCOHOLISM Conference		CHILDREN, Battered and Abused, Act	474
I. Introduction	387	CHILDREN, Hyperactive	159
II. Future Physicians	389	Lymphomas	303
III. Medical School Education	391	CLASS of 1975: Differential Diagnosis	207
IV. Graduate Medical Education	393	CLERGY and Physicians	329
V. Summary	396	CLINICAL Diabetes Association, Program	338
AMA-ERF	33, 251	CLOTTING Factors In Burn Sepsis	98
AMBULATORY Surgical Facility	313	COMMITTEE on Drug Abuse Report	324
AMERICAN-German Postgraduate Conference	456	CONSTANTINE, Herbert (photo)	216
AMERICAN Medical Association		CORONARY Syndrome	507
AMA-ERF	33, 251	CRITICALLY Ill, Respiratory Monitoring	104
Physician Recognition Awards	454	CURRICULUM, Flexible	205
Unified Membership	399, 400	CYSTINOSIS	24
AMERICAN Retired Physicians Association	513	DETOXIFICATION Facilities	477
ANATOMY of the Judicial Process	56	THE DOCTOR by Fildes (photo)	437
ANGINA Pectoris, Myocardial Revascularization	465	DOCTOR As A Revolutionary: The Next Twenty-Five	
ANGINA Pectoris, Surgery	345	Years (Presidential Address)	175
AMINOGLYCOSIDES	468	DOCTORS and the Press	306
ANTIBIOTIC Update:		DON'T Practice on Me	436
I. Penicillins, Cephalosporins	62	DRUG Abuse Committee Report	324
II. New Aminoglycosides	468	DRUG Reactions, Implications	274
ARONSON, Stanley M. (photos)	184, 204	EDITORIALS	
BARNES, Fred W. (photo)	238	Alcoholism in Rhode Island	398
BATTERED, Abused Children Act	474	Correction	477
BIKINI Doctor Fired	368	AMA and You	315
BLEACHING in U. S., 1811	439	BMS '75	230
BLUE Shield -- Fifteen Years	309	CAT, ACTA, and CT	476
BLUMENKRANZ, Mark (photo)	218	Health Care Crisis	28
BOOK Reviews		Hope and Despair in Providence	315
Clinical Perinatology (Aladjem, Brown)	134	Johnny Can't Write	506
Diagnosis and Treatment of Thyroid Diseases		Liaison Psychiatry	351
(Sterling)	368	Miniendoscopy	65
General Ophthalmology (Vaughan, Asbury)	45	New Oral Diuretics	166
Handbook of Poisoning (Dreisbach)	247	Nurse Practitioners in Rhode Island	441
Is It Well With The Child? (Strauss)	414	PL 93-641	281
Physiological Basis of Starling's Law of the Heart		Safety in Numbers	351
(Ciba)	34	United Way	398
The Poisoned Patient (Ciba)	247	We are Pleased and Proud	121
BOOKS for Review	188	EDITOR'S Mailbox	29, 352, 399, Reply 400, 477, 507
BOWEN, William C.	439	EDUCATION, Medical, Continuing	3
BREAST Cancer, Epidemiology and Endocrinology	341	EDUCATION, Medical, Future	226
BROWN Medical Student and Community	417	ENDOMETRIAL Cancer, Waterman Dialogue	
BROWN University Alcoholism Conference (see Al-		Introduction	257
coholism Conference)		General	259
BROWN University Medical School		Radiation	267
Cartoons	May Issue	Medical Management	271
Case Records	229	ENERGY Metabolism, Sepsis and Trauma	106
Class of 1975	71, 207	ERIKSON, George E., Chairman	185
Class of 1975 Photos	210-214, 221-225, 232-236	(photos)	209, 237
Faculty	489	ETHICS, Medical	39
First Medical School	201	FETRUP, Fazia (photo)	218
Issue May; Editorial Credits	199	FAMILY Practice	215, 217
Letter from the Dean	184	FAMILY Practice Education	373
M.D. 1975	183	FAMILY Practice Training in R. I.	349
Message from the Dean	3, 39, 71, 329, 373, 417	FARRELL, John E., Elected	40
Postgraduate Training Plans	238	FAUSTO, Nelson (photo)	240
BURN Sepsis, Clotting Factors	98	FINKE Fund Prize, 1975, Notice	317, 426
BURROUGHS, Robert (photo)	199	FLEXIBLE Curriculum at Work	205
BUTLER Hospital Symposium, Program	121, 148	FOWLER, Reginald (photo)	456
CALABRESI, Paul (photo)	216	FUTURE of Medical Education	226
CANCER Dialogue	257	GAILLETTI, Pierre (photo)	204

SUBJECT INDEX

	Page		Page
GALLSTONES	429	PENICILLINS	62
GARDNER'S Syndrome	471	PERIPATETICS	13, 51, 443, 486, 511
GELL, Jon (photo)	218	PHLEBORHEOGRAPHY	111
GEORGE W. Waterman Cancer Dialogue (see Endometrial Cancer, Waterman Dialogue)		PHYSICIANS, Rhode Island, Survey	161
GORDON, Hirsch Loeb	321	PHYSICIANS Seek R. I. Opportunities	295, 447, 512
HAMOLSKY, Milton (photo)	216	PRESIDENT'S	
HEALTH Planning	500	Address (RIMS, Chaset)	137
HEMATOMA, Subdural, in Children	284	Address (PMA, Mathieu)	175
HEMATURIA	156	Page (RIMS)	41, 73, 137, 243, 291, 375, 419, 453
HEMODIALYSIS	151	PRESS and the Medical Profession	306
HEMORRHAGE Control	101	PRIMARY Care Physicians	161
HEPATIC Artery Infusion	91	PROVIDENCE Medical Association	
HORWICH, Arthur (photos)	199	President's Address (Mathieu)	175
HOUSE of Delegates (see Rhode Island Medical Society)		PSRO	53
How's That Again? Department	449	PSYCHIATRIC Consultation Liaison	347
HYALINE Membrane Disease	131	PSYCHO-Active Medication	159
INFUSION, Liver Cancer	91	QUINLAN Quagmire	508
INSURANCE, Medical Liability	73	RADIATION Effects on Thyroid	94
INTERNSHIPS, Class of 1975	71	RELIGION and Medicine	329
ISAAC Ray Symposium Program	32, 167	RENAL Disease, End Stage	151
JOINER, Jane (photo)	239	RESOURCES Development Act 1974	432
JUDICIAL Process	56	RESPIRATORY Distress Syndrome	131
KAY Pediatric Symposium Program	418	RESPIRATORY Monitoring	104
KENNY Clinic Day Program	374	REVOLUTIONARY, Doctor As	175
KONG, Chong M.: Recollections (photo)	186	RHODE Island, Battered Child Act	474
LEADERS in American Medicine, Program	455	RHODE Island Medical Journal, Statement of Ownership	402
LEARNING Problems	159	RHODE Island Medical Society	
LEBUC, Elizabeth (photo)	204	Administrative Changes	450
LIVER Cancer, Percutaneous Infusion	91	Annual Meeting Notice	42
LYMPHOMAS in Children	303	Appointed Committees	October Newsletter
MALPRACTICE		House of Delegates	February Newsletter, October Newsletter, 361, 407, 481, 483, 514
Common Sense	243	President's Address (Chaset)	137
Patient Pays	291	President's Page	41, 73, 137, 243, 291, 375, 419, 453
Patient Wins	375	RHODE Island Professional Standards Review Organization (see PSRO)	
Statement by Doctor Chaset	73	RHODE Island, Renal Disease	151
MANPOWER Task Force	161	RIGHA	507
MANUSCRIPT Preparation, Rules	134, 180, 284, 314, 454	ROMANIAN Health-Care	17
MEDICAL Technology	504	ROTMAN, Boris (photo)	240
MEDICATION, Psycho-Active	159	SAKS, Bonnie (photo)	218
MEMOS, WARIMS	36	SENATOR Bennett: Where Are You?	53
MESSAGE from the Dean (see Brown University Medical School)		SENET, Alfred (photo)	228
MESSER, Asa (photo)	201	SEPSIS, Energy Metabolism	106
MICROCIRCULATORY Dynamics	101	SIMEONE, Fiorindo A.	89
MINIENDOSCOPY	65	(photo)	88
MITCHELL, Glenn (photo)	239	STEWART, Babette (photo)	216
MITCHELL, Valerie (photo)	239	STEWART, Peter (photo)	216
MUTUAL Obligations, Medicine and Press	306	SUBDURAL Hematoma in Children	284
MYOCARDIAL Revascularization, Angina Pectoris	465	SURGERY, Ambulatory Facility	313
NAVAL Obstruction, Gardner's Syndrome	471	SURGERY, Angina Pectoris	345
NATIONAL Health Planning, 1974 Act	432	SURVEY, Physicians in Rhode Island	161
NAVY's Withdrawal	500	TECHNOLOGY, Medical	504
NECROLOGY, 1974	5	TEL-MED Program	43
NENNO, Donald (photo)	239	THYROID Function, Tests	497
NEPHROTIC Syndrome	26	THYROID Radiation Effects	94
NEWSLETTER	February and October	TODD, Malcolm C. (photo)	February Newsletter
Oath of the Physician	185	TRADITIONS	201
O'HARA, Kathy (photo)	199	TRAUMA, Energy Metabolism	106
ONE Sentence Essay	32, 34, 55, 237, 318, 401, 449, 475, 480, 511	VIRGIN Islands Clinical Conference	330
PARKS, Robert E., Jr. (photo)	216	WATERMAN Dialogue	257
PAWTUCKET Memorial Hospital, Family Practice Program	349, 373		

SUBJECT INDEX

	Page		Page
WATERMAN, George W. (photo)	258	WOMAN's Auxiliary	
WAYLAND, Francis (photo)	201	AMA-ERF	33, 251, 456
WOMEN in Medicine	219	Memos	36

AUTHOR INDEX

ADAMS, Levi C.	387	KELLEHER, Thomas F.	56
ADELMAN, Maurice	414	KELLEY, Rita M.	271
ALTMAN, Lawrence K.	306	KENNEY, Pardon, editor	229
ARONSON, Stanley M.	3, 71, 184, 330, 387, 417	KINDER, Robert S. L.	45
BARBER, Hugh, R. K.	259	KITCHEN, H. Nord	399
BARRETT, Joseph	159	KONG, Chong M.	24
BECK, Irving A.	34	KWON, Tae Hae	259
BELAIR, Ronald R.	161	LAUFER, Maurice	159
BLUMENKRANZ, Mark Scott	226	LAWTON, Robert P.	161
BOSMA, Willem G. A.	391	LEKAS, Mary D.	471
BOWEN, E. A.	507	LEWIS, Robert V.	161
BROWNE, Howard S.	352	LEWITT, Peter	207
CALDAMONE, Anthony	205	MANSOUR, Edward G.	91
CALENDA, Belle	33, 251, 456	MARKS, Herman	159
CAPONE, R. J.	465	MARTIN, Horace	201
CASHMAN, C. W.	465	MATHIEU, Peter L., Jr.	175
CHASET, Nathan	41, 73, 137	McCOOMBS, Robert P.	349
CHAZAN, Joseph A.	151	McOSKER, Thomas C.	284
CLOWES, George H. A., Jr.	106	MONAHAN, G. F.	247
COMMITTEE, RIMS, Psycho-Active Medication	159	MOORE, Mary Pat	500
COOPER, G. N.	465	MOST, A. S.	465
COOPER, James W., Jr.	274	NANIAN, K. B.	465
CRANLEY, John J.	111	O'BRIEN, Martin J.	161
DELUCA, Michael	507	OH, William	131, 134
DENHOFF, Eric	159	O'NEILL, William	159
DILorenzo, Joseph	217	PAGLIARINI, Ann	161
DOBYNS, Brown M.	94	PARKS, Robert E., Jr.	186
FARLEY, John E., Jr.	159, 324	PAULL, Alton M.	352
FLETCHER, Gilbert	267	PORTER, Arnold	309
FOLKMAN, Judah M.	436	RAYMOND, R. D.	465
FORMAN, Edwin N.	303	REISMAN, Barry	259
FRATIANNE, Richard B.	98	RIHSC Subcommittee	161
GALLETTI, Pierre M.	39, 151, 396	RILEY, R. S.	465
GARELLA, Serafino	151	RUBIN, Phillip J.	62, 468
GLICKSMAN, Arvin S.	257, 267, 271	RUGGIANO, John R.	347
GOLDOWSKY, Seebert J.	400, 402	SAVITZ, Harry A.	321
GOODMAN, Tobias M.	156	SCALA, Michael E.	508
GRAFER, Edward A.	259	SIROTA, Stephen H.	500
GRFER, David S.	373	SOMMERS, Sheldon C.	259
HAMLIN, Hannibal	17	STUART, John R.	400
HAMOLSKY, Milton	368, 497	SULLIVAN, Frank W.	53
HARDMAN, David C.	439	TIERNEY, John T.	432
HELLER, Abraham	477	TODD, Malcolm, C.	389
HILL, Charles L.	313	TRACHTENBERG, Susan	504
HOGREFE, Louis	215	TRIEDMAN, Leonard J.	341
HOPKINS, Robert W.	101, 134	TURNEY, Stephen Z.	104
HORWICH, Arthur, editor	229	UTTER, Wilson	159
HOYE, Stephen J.	243, 291, 375, 419, 453	VARGAS, L. L.	465
IANNUCILLI, Edward A.	429	WATERS, William J.	500
JASO, Hector	159, 474	WEAVER, Michael J.	341
JOINER, Jane Herrod	219	WILLIAMS, Kenneth H.	393
KAHN, Sewell I.	26, 151	YOUNG, Neil	500
KARLSON, Karl E.	345, 465	ZINER, Stephen H.	62, 468
KAROTKIN, Edward H.	131		

5678-93-1 N2



The New York Academy of Medicine

DUE IN 4 WEEKS UNLESS RENEWED
NOT RENEWABLE AFTER 8 WEEKS

[illegible]

